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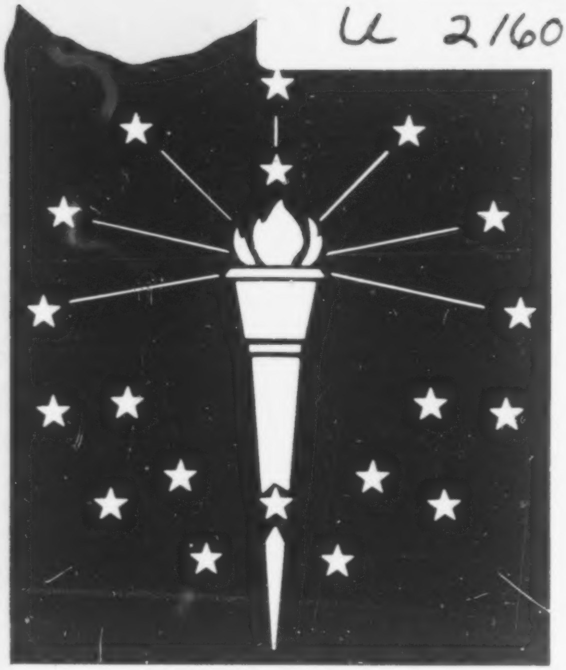

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Special Issue
Business and the Law

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BUSINESS AND THE LAW

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Introduction

It is a fact of life that as we grow older our lives grow increasingly more complex. This is partly due to the expansion of our individual interests as we enter the mainstream of American society. The greater factor complicating our lives, however, is the accelerating complexity of the society in which we live. Technical innovations have propelled us into a world different from the one in which we were born, or matured, or raised a family.

The state of the law is but one example of the increasingly dynamic state of our society We devote this issue of the *Indiana Business Review* to topics in law affecting business. Some of you readers may have taken a business law course several years ago that concentrated on teaching you what the current law is. As you have no doubt discovered this approach has its limitations, for the law is not static, but instead is constantly changing. Some areas of the law have changed dramatically in the last twenty years. Other areas did not even exist twenty years ago.

The dynamism of the law is the major theme of the articles in this issue. Our authors' goal is to show you that law evolves not in some helter-skelter fashion but, as Professor Metzger writes, reflects contemporary social and economic needs and values. By explaining the connection between these needs and values and the past and present state of law, our authors hope to enable you to anticipate changes in law by observing the social and economic setting in which you live. And by equipping you with the tools to anticipate legal changes, we hope that you may more easily succeed in the business world.

L. Thomas Bowers
Consulting Editor

Job Security in the 1980s

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One prominent legal historian has observed that "the strongest ingredient in American law, at any given time, is the present: current emotions, real economic interests, concrete political groups."[1] An examination of the development of virtually any major area of our law provides ample evidence of the powerful influence contemporary social needs and values have on the evolution of legal rules. A look at the growth of our law in the area of job security from this sociohistorical perspective not only confirms the validity of this method of legal analysis, but, more importantly, explains contemporary developments in this area and enables us to predict the likely course of future legal rules governing the employment relationship.

In the eighteenth and the early nineteenth century in America eighty percent of the work force was self-employed and such employment relationships as existed were personal and highly paternalistic. Apprenticeships were common, with the employer being seen as standing *in loco parentis* to his employees, with a duty to train them and to see to their secular and religious education. Courts protected such workers from unfair discharge. Employment conditions were relatively nonhazardous, and a scarcity of labor and the ability to live off the land in an agrarian society meant unemployment was not a significant problem. All large organizations were objects of distrust: corporations were few in number and small in size and labor unions were viewed as criminal conspiracies.

The Industrial Revolution changed all this, however, as the emerging factory system produced impersonal employment relationships, dangerous working conditions, and a large pool of landless, wage-dependent workers. The emerging business cycle also began to produce periodic unemployment. The courts, perceiving the promotion of industrialization as the paramount social goal of the era, responded to these changing conditions largely by evolving a system of legal rules designed to protect business. The courts' strong *laissez faire* orientation manifested itself in rules making it very difficult for employees to recover from their employers for on-the-job injuries and by developing the concept of *employment at will* as the basic contractual rule governing the employment relationship.

Employment at will basically meant that either party to an employment relationship could terminate the relationship at any time for any, or no, reason. Even employment contracts promising "steady," "regular," "permanent" or "lifetime" employment were interpreted by the courts as creating only an employment at will relationship. Theoretically, both parties to the employment relationship were being afforded equal treatment, as the courts assumed equal bargaining power between the parties, unlimited mobility on the part of the work force, and unlimited job opportunities for workers. It is, of course, doubtful whether these assumptions were ever realistic, but they were clearly undercut by developments in the latter part of the nineteenth century. Technological advances reduced employment opportunities as machines performed many tasks previously performed by workers and the required increasing specialization of the work force began to restrict employee mobility. The rise of large business organizations after the Civil War produced obvious disparities of bargaining power between business and labor. The labor union movement emerged and began to spread rapidly.

The courts were, at first, slow to respond to these changing social conditions. The labor movement began to make some progress, however, in the legislatures of our most heavily industrialized states as legislators began to react to the inescapable fact that the political balance in their states was shifting. The first worker's compensation statutes and the first unemployment compensation laws were enacted in the early years of this century. Federal statutory encroachments on managerial authority, in the name of protecting employee rights, began in the period following the Great Depression and continue to proliferate unabated to this day. The Norris-LaGuardia Act in 1932 was followed by the Wagner Act in 1935, the Fair Labor Standards Act of 1938, the Equal Pay Act of 1963, Title VII of the Civil Rights Act of 1964, the Age Discrimination in Employment Act in 1967, the Occupational Safety and Health Act in 1970, the Employee Retirement Income Security Act in 1974, and the Pregnancy Amendment of 1978.

Still, employment at will continues to be the basic legal theory governing most employment relationships in the United States today. Although the courts have significantly retreated from most of the unabashedly probusiness, *laissez faire*-inspired rules of tort and contracts that they created in the nineteenth century, they still have been reluctant to discard the employment at will principle. This reluctance is probably chiefly the product of judicial fears of unduly encroaching on managerial authority.

Is employment at will likely to survive this decade? A brief survey of the relevant social factors indicates a strong probability that it will not. The United States is now a nation of employees with ninety percent of its work force falling into the wage earner category. Roughly two-thirds of this work force, including the great majority of managers, labor without the protection against wrongful discharge afforded their more fortunate peers who are protected by collective bargaining agreements, tenure rules, or civil service rules. In our current relatively high unemployment economy the individual consequences of being fired are often disastrous. Many workers have no significant assets and are totally wage-dependent. Fringe benefits like pensions, and health and life insurance are commonly tied to employment. Recent studies delineate the social consequences of unemployment, noting statistical correlations between high unemployment and alcoholism, child abuse, suicide, infant mortality and crime.

Combine these social facts with the realization that every other Western industrialized nation affords workers with some form of protection against wrongful discharge and one is moved to conclude that we are likely to follow. Already, as has been noted previously, the trend to restrict managerial discretion in matters of employment is plainly apparent in statutory encroachments on managerial authority. Terminations based on union activities, age, race, sex, national origin, religion, complaints to OSHA and pregnancy have been severely restricted. There are also numerous indications that the courts are in the process of a similar piecemeal erosion of the employment at will idea.

Many courts have recognized an employee

right to sue in tort for abusive discharges that are contrary to some clearly expressed public policy. Thus employees who have been fired for refusing to perjure themselves before legislative committees at their employer's behest,[2] for filing a worker's compensation claim,[3] for refusing to avoid jury duty,[4] and for refusing to take part in illegal price-fixing[5] have been granted recovery against their employers.

Similar signs of change are appearing in contract cases. Thus, one court found an implied contract right not to be discharged except for just cause existed for a long-time employee who had recently moved his family to another state at his employer's request.[6] In another instance, an employer's promise to pay one-half the moving expenses of a store manager trainee as soon as employment commenced and the balance after one year was held to create an implied contract for one year's service and nót employment at will.[7] Similarly, a Michigan court recently found that employer assurances that employees would be retained "as long as you're doing the job" gave rise to a contract right not to be discharged except for cause.[8]

The New Hampshire Supreme Court, in *Monge* v. *Beebe Rubber Company*,[9] has gone so far as to recognize a contract right in all employment contracts against bad faith or malicious terminations. Noting that the law governing the employment relationship has "evolved over the years to reflect changing legal, social and economic conditions,"[10] the court concluded that "the employer's interest in running his business as he sees fit must be balanced against the interest of the employee in maintaining his employment, and the public's interest in maintaining a proper balance between the two."[11] Although *Monge* falls short of adopting a full "just cause" dismissal standard—there is a gray area between bad faith terminations and terminations for less than cause—the thrust of the opinion is unequivocally away from employment at will.

The import of these varied factors has not been lost on some concerned observers. Last year Peter Drucker, writing in *The Wall Street Journal*, predicted the eventual recognition of a property right in employment.[12] Another commentator has suggested a statutory resolution of the issue, arguing that a "good cause" dismissal standard is probably inevitable and that business's best course is therefore to cut the best deal it can by accepting such a standard in exchange for a drastic limitation in the number of forums in which a wrongful discharge claim can be brought.[13] This would be desirable, for, as he observes, under present law "[a] politically active, elderly handicapped black woman might bring charges against a company in four or five different forums under eight or nine different theories."[14] In fact, one desirable consequence of a "good-cause" standard might be a decrease in the number of employees charging racial or sexual discrimination, as many such claims may in reality result when employees who feel they have been dealt with unfairly pursue the only legally available avenues of challenging their former employer's actions.[15]

However, the likelihood of such a statutory resolution in the near future is at best uncertain. The current political climate and the fact that many people in business are likely to instinctively oppose a statutory "good cause" standard as an infringement on managerial authority means that any such legislation is likely to face formidable opposition. Unions may also resist such legislation if they come to perceive it as a threat to their current role as guarantors of employment security. In the face of legislative inaction, however, increasing numbers of courts are likely to respond to changed social circumstances and retreat from the employment at will standard, which, after all, was their creation.

The informed manager is therefore likely to be confronted with a dilemma: should organizational resources be dedicated to fighting what may be a lost cause, or devoted to preparing to meet the inevitable by adopting more careful hiring methods and internal due process procedures for dealing with employee terminations? Our historical experience tends to support the latter course.

FOOTNOTES

1. L. Friedman, *A History Of American Law*, at p. 14 (1973).

2. Petermann v. International Brotherhood of Teamsters, 344 P.2d 25 (Cal. 1959).

3. Frampton v. Central Indiana Gas Company, 297 N.E. 2d 425 (Ind. 1973).

4. Nees v. Hocks, 536 P.2d 512 (Ore. 1975).

5. Tameny v. Atlantic Richfield Oil Co., National L.J., June 30, 1980, at p.1.

6. Foley v. Community Oil Co., 64 F.R.D. 561 (D.C.N.H. 1974).

7. Miller v. Community Discount Centers, Inc., 228 N.E. 2d 113 (Ill. 1967).

8. Toussaint v. Blue Cross & Blue Shield, 48 U.S.L.W. 2826 (June 10, 1980).

9. 316 A.2d 549 (N.H. 1974).

10. *Id.* at 550.

11. *Id.*

12. P. Drucker, The Job as Property Right, Wall Street Journal, March 4, 1980, at p. 18.

13. J. Getman, Good-Cause Compromise, Wall Street Journal, August 4, 1980.

14. *Id.*

15. *Id.*

Greater Legal Exposure for the Indiana Seller of Workplace Products

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When the Indiana General Assembly, as part of its last official legislative act of 1978, passed the Indiana Product Liability Act,[1] many manufacturers of workplace products selling in this state breathed a collective sigh of relief. This statute, which purported to restate and recodify Indiana tort law with respect to product liability, also contained three new legal defenses previously unavailable to Indiana manufacturers. These new defenses can be characterized as: 1) the concurrent misuse by an employer (or other third party) defense; 2) the "state of the art" defense; and 3) the ten year from initial delivery repose defense.

First, the act dealt with the situation where an employee's injury is caused jointly by a dangerous defect in a workplace product coupled with the *employer's* misuse of the product.

Under state law, generally, the employee not only can recover workers' compensation from his employer but he is also free to sue the product manufacturer under product liability theories and may recover a judgment that may be many times the limit provided for in the worker compensation statutes. If the employee does recover from the product manufacturer, however, the employer can take back from the employee's award what he has paid out to him in workers' compensation payments leaving the product manufacturer to foot the entire bill. The new statute, provides that the employer who *misuses* the product may no longer recover his workers' compensation payments when he and a manufacturer of a defective workplace product are both adjudged to have caused the worker's injuries. Of course, the product manufacturer must prove that the employer was a product misuser.

The second new defense becomes available when a product is designed "in conformity with the generally recognized state of the art at the time the product was designed or manufactured," and the design is responsible for the physical harm. The term "state of the art," has generally been interpreted by courts to mean what was technologically feasible—not what was the industry practice—at the time of manufacture or design. This defense probably provides substantially less protection to the seller than is generally supposed.

The third defense is the centerpiece of the statute. It is generally called a repose provision, which in the Indiana act appears to cut off the manufacturer's liability between ten and twelve years after a product is initially delivered to a user or consumer. Although the provision is clumsily worded, it was clearly intended to be an "outer cutoff" of liability and it promises to have some impact on workplace product liability where products, such as machine tools, are generally long-lived. Prior to this statute's enactment the manufacturer's exposure to strict tort liability was open-ended if the plaintiff could prove that the product was defective in design, manufacture, or deficient in warnings and instructions when it originally left the manufacturer's control. Often the sheer uncertainty generated by such open-ended liability was sufficient to increase product liability insurance rates by a "fudge factor" because actuaries were unable mathematically to assess the risks.

It was the escalation—indeed the explosion—of liability insurance rates in the 1970s that motivated Indiana manufacturers and their insurers to press for legislative relief. A number os smaller Indiana manufacturers in high- and medium-risk industries testified before the legislature that product liability insurance had become virtually unobtainable and, if obtainable, was certainly unaffordable, sometimes rising two and three thousand percent within a two- or three-year period.

This rocketing of insurance rates can be traced to a number of factors, but the rapidly increasing frequency and size of product liability judgments, as well as settlements out of court, were certainly the most significant causes. The surprise to the insurance industry generated by this developing judicial trend, coupled with uncertain actuarial projections for the future, probably led to some panic pricing of product liability insurance lines in the 1970s. But what has been branded by some as insurance industry overreaction may turn out to be fully justified if a recent series of Indiana cases are considered, notwithstanding the protections promised manufacturers by the new Product Liability Act.

In 1977, the Seventh Circuit Court of Appeals, deciding *Huff* v. *White Motor Corp.*,[2] under Indiana law, abandoned an earlier position it had held for eleven years that had greatly favored product manufacturers. The court in *Huff* ruled that the manufacturer must now foresee the ordinary environment in which its product (in *Huff*, a truck) will function, and if that ordinary environment includes frequent collisions or other calamitous events, the manufacturer must provide a reasonable measure of protection for the user even if the collisions or calamities were caused by the user or by third parties. This "crashworthy" requirement was supported by a duty found in 1976 by the Indiana Court of Appeals in *Gilbert* v. *Stone City Construction Co.*,[3] that a product manufacturer must employ feasible safety devices, if available, and the failure to do so will make its product defective. Indiana courts in these two cases were recognizing the manufacturer had some duty to protect the user from uses of the product that the manufacturer neither desired nor intended. These courts stopped short, however, in *Huff* and *Gilbert*—temporarily at least—of declaring that the manufacturer had a duty to anticipate or foresee conduct that could be characterized as product "misuse."

While the manufacturer's duty to protect the unwary, unfortunate, or even negligent product user from the consequences of fate, or his own carelessness, was being heightened by judicial decision, the courts were simultaneously limiting the user's duty to protect himself. The negligent failure of a product user to discover a defect in a product that he should have discovered was eliminated as a bar to his recovery in 1970 when Indiana adopted the legal theory of strict liability in tort, but a risk a user or consumer was aware of, or one he *should have* been aware of, and which he unreasonably incurred, was sufficient to defeat his claim until 1978. In that year, however, in *Kroger Company* v. *Haun*,[4] the court opted to follow the majority American rule that requires a defendant to prove that the plaintiff was *in fact* fully aware and appreciative of the unreasonable risk he was voluntarily incurring before the defendant would be granted the benefit of a defense.

This "incurred risk" defense has traditionally been given a wider sweep in the workplace. A nineteenth century rule had held that, as a matter of law, a worker voluntarily incurs, through an implied contract with his employer, the risk of ordinary hazards of the employment he accepts as well as the extraordinary risks of which he later receives notice. That doctrine was shrunk substantially for Indiana in 1978 in *Meadowlark Farms* v. *Warken*,[5] to include only the ordinary risks of employment, and in 1980, in *Bemis Co.* v. *Rubush*,[6] the rule was for all practical purposes held not to apply to strict liability actions, a holding that virtually destroys its viability.

The *Bemis Co.* case dealt a fatal blow to yet another defensive doctrine that had served to insulate workplace product manufacturers from a number of Indiana product liability judgments. Indiana cases had stated that a party could not recover if the danger which causes his injury was open and obvious. Clearly, the plaintiff could not be heard to argue, for example, that he had not been *warned* of the danger when anyone might see that a power saw would cut off the fingers of anyone who stuck his hand in it. Yet in jurisdiction after jurisdiction courts have decided that the open and obvious danger rule should not go so far as to relieve the product manufacturer of *guarding* the user, even from obvious danger, if it were feasible to do so. In *Bemis Co.*, the court recognized this duty existed for the Indiana manufacturer and it held that although obviousness of danger might be an important factor to consider it would no longer be an absolute bar to recovery.

Indiana courts recognized early that there was a duty to warn users of hidden dangers, but only recently have they scrutinized the adequacy of those warnings. In 1980, in *American Optical Company* v. *Weidenhamer*,[7] the Indiana Court of Appeals, reiterated a rule that stated that an inadequate warning is equivalent to *no warning* and a warning that is deficient as to either form or content will be found to be inadequate. A warning printed in 1/32" type was held in the *Weidenhamer* case to be inadequate in form because other words printed on a package of industrial safety glasses that seemed to imply that the glasses were impregnable were printed in significantly larger type.

The warning that stated that the glasses were "NOT unbreakable" was also held to be inadequate as to content because the message failed to disclose that the glasses might shatter into jagged pieces.

The duty of the manufacturer to deal with unintended use, or misuse, of his product was heightened significantly by the Indiana Court of Appeals in *Conder* v. *Hull Lift Truck, Inc.*[8] The manufacturer of a lift truck, Allis Chalmers, was ordered to go through another trial because it may have failed to warn the mechanics employed by its customer, leasing agent Hull, that the governor-carburetor linkage of its lift truck could be misadjusted, and that the misadjustment might lead to the throttle sticking open, if at the same time a torsion spring, which was a backup device, were also to fail. It did not matter that, when this improbable scenario actually occurred, the employer of the injured plaintiff became aware of the malfunction, yet failed to remove the unit from service, failed to inform the leasing agent, failed to fix the unit, and failed to warn the plaintiff operator, who, as a result, was badly injured. The court recognized that the lift truck had been misused by the leasing agent's mechanic, but it held that the manufacturer had a duty to foresee such misuse if it could, and to warn or guard users from the consequences of the misuse if it were feasible to do so.

The duty to warn users in the workplace has generally been held to be discharged in Indiana if the product manufacturer warns the employer; the duty then to warn the employee shifts to him. While this rule was recently acknowledged by the Indiana Court of Appeals in *Shanks* v. *A.F.E. Industries Inc.*,[9] the court held that an *additional* duty to warn users by means of a built-in warning safety device, such as a bell or siren, might also reasonably be found by a jury to exist, and a trial on that issue was ordered. The Indiana Supreme Court reversed that decision on the ground that a physical warning device was not so clearly an effective solution to predictable safety problems from the perspective of the original design of this product (which was a grain dryer later incorporated by others into an automated complex) as to permit a jury to speculate that its omission was a product defect. The supreme court did not, however, reject the principle advanced by the court of appeals that additional physical warnings might be required from the original manufacturer in cases where it can be proven they will be effective and feasible. Nor did the supreme court attack the appellate court's holding that a manufacturer of a component of a larger product was just as subject to a product liability suit as the final assembler.

It should be noted that at this writing the *Bemis Co., Conder,* and *Weidenhamer* cases are still pending, either for rehearing by the Indiana Court of Appeals, or for transfer to the Indiana Supreme Court. It should also be mentioned that not all of the recent Indiana cases have been expansive with respect to manufacturer's liability. In several cases, statutes directed at other classes of defendants such as employers were not extended to reach product manufacturers. In another case legal causation was not expanded to include remote causes as sources of liability, and the "concept of delivery" was required before strict liability could be applied in two others. In still another warranty case, decided under the Uniform Commercial Code, an injured party not living in the same household as the product purchaser was not permitted to sue the product manufacturer for breach of warranty.

On balance, however, the recent trend in courts deciding under Indiana law has been to expand the scope of the strict product liability theory. This theory does not go so far as to make the manufacturer an insurer whenever his product is involved in an accident, but it does make the reasonableness of the manufacturer's *conduct* irrelevant. Instead, strict liability focuses on the defective *condition* of the manufacturer's products. While the theory was adopted in response to pressures for greater consumer protection, an arena for substantial litigation has developed with respect to workplace products. Of fifteen Indiana product liability cases recently surveyed, twelve involved workplace products. Nationally, nearly half the product liability dollar payout goes to injured worker-users–not consumers.

Injured workers, as we have noted, recover automatically from the state worker compensation systems. The limits to worker recovery, however, in many states, Indiana included, are arguably inadequate. It has been suggested that because the product liability tort litigation system is extremely wasteful and uncertain, it does not really serve the interests of injured workers as well as would an augmented and reformed workers' compensation system. This suggestion leads to the conclusion that the amounts spent on workplace product liability judgments and settlements, together with the excessive friction costs that they generate, should be systematically diverted somehow to the workers' compensation fund. This writer believes this suggestion should be carefully examined and debated.

In conclusion, it should be noted that even the protections offered product sellers by the Indiana Product Liability Act of 1978 may not be all that secure. The statute was vigorously attacked recently in federal court in *Dague* v. *Piper Aircraft Corp.*[10] Plaintiff in that case, whose husband was killed in an allegedly defective thirteen-year-old airplane argued that the statute's ten-year repose provision removed a remedy to which she was entitled under the Indiana Constitution. She also claimed that the statute only benefits a special class of defendants, i.e., product manufacturers, that it discriminates against "old-product users," and that it was enacted as a rider to a court jurisdiction bill in violation of the Indiana Constitution's one subject rule. The statute survived all these challenges at the trial level, and on appeal, but other provisions of the statute will certainly require judicial interpretation in the future.

Footnotes

1. Indiana Product Liability Act of 1978, Ind. Code. 33-1-1.5-1 to-8 (Supp. 1980).

2. Huff v. White Motors Corp., 565 F.2d 104 (7th Cir 1977).

3. Gilbert v. Stone City Const'r Co., 357 N.E. 2d 738 (Ind. Ct. App. 1976).

4. Kroger Co. v. Haun, 379 N.E. 2d 1004 (Ind. Ct. App. 1978).

5. Meadowlark Farms v. Warken, 376 N.E. 2d 1212 (Ind. Ct. App. 1978).

6. Bemis Co. v. Rubush, 401 N.E. 2d 48 (Ind. Ct. App. 1980).

7. American Optical Co. v. Weidenhamer, 404 N.E. 2d 606 (Ind. Ct. App. 1980).

8. Conder v. Hull Lift Truck, Inc., 405 N.E.2d 538 (Ind. Ct. App. 1980).

9. Shanks v. A.F.E. Indust. Inc., 403 N.E. 2d 849 (Ind. Ct. App. 1980), Rev'd, 416 N.E. 2d 833 (Ind. 1981).

10. Dague v. Piper Aircraft Corp., No. 599-293 (N.D. Ind., May 27, 1980). appeal docketed, No. 801938 (7th Cir. June 26, 1980), Four questions cert. to Indiana Supreme Court answered 401 N.E. 2d 207 (Ind. 1981), affm'd, No. 80-1938 (7th Cir. Apr. 17, 1981).

The Constitutionality and Application of the Indiana Product Liability Act

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During the last decade manufacturers were increasingly subjected to product liability suits, escalating awards, and spiraling insurance premiums. While the spiraling premiums were in part a response to the increases in suits and awards, they were in large part attributed by the insurance industry to be the result of inability to predict risks because of the open-ended nature of liability for products. As long as a product is in use, the manufacturer is subject to liability if that product injures someone. In some instances, manufacturers were held liable for products sold twenty to thirty years earlier. In an effort to control this open-ended liability and to stabilize the increases, the Indiana legislature in 1978 passed the Indiana Product Liability Act. Indiana joined over a third of the states in passing such legislation and in making a statute of repose the primary vehicle for alleviating the problem. Since statutes of repose set a definite time limit after which no suit can be brought, they bar most old-product suits and make risks more predictable.

Concurrent with this legislative trend toward protective legislation has been a countervailing trend in some courts to expand traditional tort concepts to facilitate product liability lawsuits, especially those based on time-delayed injuries from products. Time-delayed injury suits, involving products such as asbestos, Agent Orange, and DES and other drugs, are increasing by the thousands, and it has been predicted they will dominate tort law in the 1980s. Therefore, an increasingly important question is whether the statutes of repose will be found constitutional in the delayed injury context, and whether, if constitutional, they will be interpreted in such a way as not to time-bar such suits. It is not clear what the Indiana courts will do.

Under traditional tort law an individual injured by a product must bring suit within a stated period of time, usually two years, after the cause of action accrues. In the usual situation accrual would begin when that individual was injured by the product. Because of this two-year accrual statute of limitations, suit could be brought against the manufacturer of a product as long as that product was in use. Statutes of repose were designed to stop this open-ended liability by setting a definite time period—ten years in Indiana—after which suit could not be brought. Under the Indiana statute the ten-year period begins to run after the delivery of the product to the initial user or consumer. Therefore, if a person is injured by a product twelve years after delivery, that individual, on the face of the statute, would not be able to sue.

Statutes of repose have been challenged on the constitutional grounds that they deny equal protection and due process of law. The federal and state constitutions, consonant with the basic notion of equality, demand that the laws treat similarly situated people the same unless the state can show good cause for differentiation, and that rights and property cannot be taken away without due process of law. A law that denies protection to people injured by old products but allows those injured by newer products to sue, that protects manufacturers of old products but not new, that gives certain tort defendants greater protection than others is challengeable on equal protection grounds. Likewise, statutes of repose that take away an injured person's right to sue because they expire before the person can become aware of the injury are challengeable on due process grounds as well as state constitutional guarantees of redress for injury. A constitutional challenge to the Indiana statute was recently defeated when the Seventh Circuit Court of Appeals, in the case of *Dague* v. *Piper Aircraft Corporation*,[1] upheld the finding of constitutionality by the District Court for the Northern District of Indiana and the Indiana Supreme Court.

The courts in *Dague* recognized a strong presumption of constitutionality for legislative acts and the legislature's right to change the common law to reflect changes of time and circumstances. They found that Indiana's change to a ten-year repose period did not violate article one, section twelve of the Indiana Constitution, which states, "All courts shall be open; and every man for injury done . . . shall have remedy by due course of law." Since plaintiff had no vested right in a common law action or a fundamental right claim, the only requirement was that the change and the distinction it made not be arbitrary. The court found the ten-year cutoff period was a reasonable legislative response to the perceived pressing problem of the ever increasing number of product liability claims, and would ultimately hold down seller's business costs and therefore the cost of the product to the public.

While not recognized by the court, there are additional facts that support the finding that the classification is not arbitrary. More than 97% of product liability suits are reportedly based on injuries caused by products six years or less old.[2] Thus the ten-year period allows the overwhelming majority of product liability suits to be brought. Assuming the legitimacy of some cutoff period (and similar limitation periods have been recognized for architects' and builders' liability, as well as for doctors and health care providers), the ten-year period seems reasonably related to the goal of providing an actuarially certain date while protecting injured plaintiff's rights. Indeed, ten years is the period most often selected by the state legislatures who have passed statutes of repose. While a more reasonable distinction could be made—for example a relatively short period of years for noncapital goods and a long period, if any, for capital goods, which are often designed to last many years and which account for a majority of older-product injuries—the legislature does not have to make the best choice, merely a rational one.

Dague involved an old product (a thirteen-year-old plane) and the court's discussion of the statute's constitutionality centered around distinctions based on old products that injure. In the recent cases involving asbestos, DES (the generic antimiscarriage drug that allegedly causes cancer in the offspring of the ingestor), Agent Orange, toxic waste, and similar products, the individual is not injured by the use of an older product; it is the injury itself that is "old" by the time it manifests itself. The modern trend under the usual two-year statute of limitations has been to start accrual of the two-year period when the injured person discovers or could have discovered the injury. In cases of delayed injury manifestation, this could be several years after the use of the product. Since the Indiana Product Liability Statute changes the open-ended two-year accrual time, it would appear, on the face of the statute, that an individual who does not discover his or her injury until more than ten years after obtaining the product would not have a cause of action. However, analogous precedent in Indiana indicates this may not be so.

The closest analogous situation in which there have been decisions is under the medical malpractice statute of repose. That statute, which predates the products liability statute and was similarly passed to solve a perceived crisis caused by an increase in the number and amount of malpractice suits, states that suit must be brought within two years "from the date of the act, ommission or neglect complained of." It is, in other words, a time-of-occurrence statute that requires the two-year period to begin running at the time the doctor acted, and not at the time the injury is discovered. Despite this clear language, the Indiana Court of Appeals stated in *Alwood* v. *Davis,*[3] that the statute's language may have to be construed to mean within two years from the time of discovery of injury in order to have the statute's constitutionality sustained. Similarly, the products liability statute of repose may have to be reinterpreted to save its constitutionality in those cases in which product-related injuries do not manifest themselves until after ten years. Indeed, a recent decision in Florida overturned that state's twelve-year product liability statute of repose on similar grounds in a case involving such a time-delayed manifestation. In *Diamond* v. *E.R. Squibb & Sons, Inc.*,[4] plaintiff's mother took DES in 1956, but plaintiff did not discover injury until 1976. The Florida Court of Appeals found that the statute barred plaintiff's suit, but the Supreme Court said the statute could not be sustained.

It is arguable that the legislature did not intend to include these kinds of situations under the coverage of the Act. Such cases were generally not in the minds of the legislators when they deliberated and passed the Act. Attention was primarily focused on old-product suits and the actuarial uncertainty they created. Therefore, the court could find that the legislature did not intend the statute to apply to delayed manifestation injuries and could more easily find that an accrual at discovery limitation should be used.

A different argument, which would also allow some delayed manifestation suits to circumvent the statute, is based on a theory of estoppel. Traditionally if a defendant fraudulently conceals facts or information and thereby prevents a plaintiff from learning of an injury, or that he or she has a cause of action, the defendant is estopped from using the statute of limitations as a bar to the suit. The Indiana Product Liability Act is silent as to this occurrence but assumedly estoppel would apply to the repose period as it does to other statutes of limitations. In the DES cases, as in many of the other delayed injury suits, part of plaintiffs' claims are based on the allegation that defendants knew or should have known that the product was dangerous, but kept that information from the buyers and continued to advertise and market the product. Because of the nature of the injury, delayed manifestation, product-related injuries generally involve a time lag between the discovery of the cause and effect and general public knowledge. Therefore the seeds of an estoppel argument are planted in most delayed manifestation cases and may prevent the defendant from using the ten-year limitation to bar the suit.

The Indiana Supreme Court, in answering the certified question from the Seventh Circuit in *Dague* regarding interpretation of the Act states, "The Products Liability Act expressly applies to all product liability actions sounding in tort, . . . and the legislature clearly intended that *no* cause of action would exist . . . after ten years."[5] Whether the court will find the statute as unequivocal when faced with a plaintiff whose suit was barred before injury was known is problematic. There is increasing evidence that the "crisis" the statute was designed to cure was caused not so much by old-product cases as by the insurance industry's overreaction to unverified data. The Interagency Task Force on Product Liability, whose study led to the proposed Model Uniform Product Liability Act, found this to be the case, and the Model Act specifically exempted delayed injury suits from its limitations period.

Additionally, there are indications that recoveries and rates are stabilizing. A recent study by the Rand Corporation shows median jury awards are declining, and there is little outcry today by groups such as the Small Business Administration that a lack of insurance availability is forcing businesses to close or curtail their operations. Therefore, although the same policy reasons that argued for the passage of a repose period apply with equal force to delayed manifestation cases, the diminution of a crisis atmosphere combined with arguments of equity and constitutionality may cause the court to find differently in the delayed manifestation cases.

FOOTNOTES

1. Dague v. Piper Aircraft Corp., No. 80-1938 (7th Cir. April 27, 1981).

2. 1976 Products Liability Closed Claim Survey (Insurance Services Office, New York City (Dec. 1976).

3. Ind. App. , 411 N.E. 2d 759 (1980).

4. [1981] 9 Prod. Safety & Liab. Rptr. 414 (Fla. Ct. App. April 16, 1981).

5. Ind. , 418 N.E. 2d 207, 212 (1981).

Consumer Protection Trends in Indiana Real Estate Law

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One of the most striking legal developments of the past twenty years has been the dramatic elevation of the status of the consumer. In the field of product liability law, mass production and marketing of an increasing number of sophisticated and potentially dangerous products to an increasingly reliant consumer population demanded greater legal protection of consumers to ensure the quality of these products. Courts and legislatures responded by creating new doctrines that made it easier for an injured consumer to recover damages from almost anyone in the distributional chain who played a role in the marketing of a defective product.

These proconsumer developments did not, however, generally apply to the real estate industry until relatively recently. The doctrine of *caveat emptor*—"let the buyer beware"—reigned in the real estate law of Indiana and most other states. This meant that a person who sold or leased real estate had no legal obligation to deliver the property in a habitable condition unless he had expressly promised to do so.

If courts were slow in perceiving the need for greater consumer protection in real estate transactions, it was due in part to the fact that mass production and mass marketing are fairly recent phenomena in the real estate industry, and in part to the well-entrenched view of the seller-buyer and landlord-tenant relationships as arm's length transactions between equals.

The *caveat emptor* rule had presumed a self-reliant buyer or tenant who was capable of inspecting property, discovering any defects, and protecting himself against any defects by bargaining for favorable deed provisions. This view of the self-reliant consumer originated in the sixteenth century, a time in which land was the basis of the economy and agriculture was the predominant use of land. Legal doctrines envisioned the sale or lease of pastoral, undeveloped property rather than the tract home or the high-rise apartment building. The average buyer or tenant of this earlier day was a self-sufficient yeoman farmer who bargained primarily for the right to use the land and reap its fruits. The use of any structures on the land was incidental and the buyer or tenant was generally able to make repairs of these relatively simple structures himself. The traditional *caveat emptor* rule may have been perfectly satisfactory in a stable, rural, preindustrial society, but when considered against the realities of modern life, tension becomes apparent.

The population shift from rural villages to urban centers after the Industrial Revolution elevated the importance of the buildings on the land. The number of farmers decreased and the urban population bought or leased property primarily for shelter rather than for agricultural purposes. The average buyer or tenant was no longer self-sufficient. Complicated modern buildings required more maintenance at a greater cost and the increasingly mobile consumer had neither the means nor the expertise to discover latent defects or to make necessary repairs. Many homes were mass produced rather than custom-built, so that the typical buyer or tenant had even less knowledge of and control over the quality of construction. The shortage of affordable housing further lessened the buyer's alternatives. It was no longer realistic to presume that the inexperienced buyer of today could be on an equal footing with a builder who was daily engaged in the business of building and marketing houses. Rather, courts began to view the relationships of seller to buyer and landlord to tenant as unequal ones between a relatively ignorant and dependent population of housing consumers and a relatively knowledgeable, professional class of sellers. As compared to the average buyer or tenant, the professional builder-seller or landlord is likely to have a greater opportunity to prevent, absorb, and redistribute losses resulting from latent defects.

The tension between the needs of a new type of consumer population and an outdated body of law culminated in steps by Indiana courts and those of most other states to shore up the bargaining power of housing "consumers." State courts are gradually granting protection to the real estate consumer equal to that of the consumer of personal property. A series of Indiana cases decided in the past decade indicates that Indiana is in the mainstream of this trend.

SALE OF RESIDENTIAL HOUSING

New Homes

Prior to 1972, Indiana observed the rule that absent fraud or express warranty a seller of real estate (even a seller of a new house) had no obligation with respect to the quality of the property.[1] In the 1972 case of *Theis* v. *Heurer*,[2] however, the Indiana Supreme Court abolished this traditional legal immunity for the builder-seller of a new home.

In *Theis*, home buyers sued the builder-seller of their new home because the placement of sewer lines and drain tile around the house caused water and sewage to back up and collect in the house during rainy periods. Had the court merely followed Indiana precedent it would have refused to impose liability on the builder-seller. Deciding that the *caveat emptor* rule as applied to new houses was out of step with modern real estate marketing and buying practices, however, it chose to overrule the precedent.

The court noted that the *caveat emptor* rule poorly served the industry itself, lending encouragement to the unscrupulous purveyor of shoddy work. It was also impressed with the need to make consumer protection in real estate transactions consistent with consumer protection in personal property sales transactions. It cited approvingly an Arkansas court that had noted:

> ". . . there is nothing reallv surprising in the modern trend. The contrast between the rules of law applicable to the sale of personal property and those applicable to the sale of real property was so great as to be indefensible. One who bought a chattel as simple as a walking stick or a kitchen mop was entitled to get his money back if the article was not of merchantable quality. But the purchaser of a $50,000 home ordinarily had no remedy even if the foundation proved to be so defective that the structure collapsed into a heap of rubble."[3]

After deciding that *caveat emptor* reflected social conditions no longer present in Indiana, the Indiana Supreme Court substituted the implied warranty of habitability. This warranty imposes the obligation to deliver property in a condition suitable for human habitation. It does not guarantee that the house will be perfect or free from all defects, but it does give the buyer the right to rescind the sale and to sue for damages if there are major defects that cannot be easily remedied and that render the house unfit for human habitation. Presumably, the buyer could recover the cost of necessary repairs. Since the warranty of habitability is an implied contractual undertaking on the part of the seller, the buyer's ability to recover damages does not depend on the seller's knowledge of the defect, or even on the seller's negligence in causing the defect. Rather, the focus is on the condition of the house.

In *Theis*, Indiana joined the ranks of the majority of states that now recognize the implied warranty of habitability. Since the *Theis* decision involved *first* purchasers of a *new* home from a *builder-vendor*, however, it was a potentially narrow decision. Litigation in the ensuing years tested its breadth as a precedent by testing what classes of real estate consumers are protected by the implied warranty of habitability.

Used Homes

If Indiana entered the mainstream of modern legal thought by recognizing the implied warranty of habitability in *Theis*, it soon moved ahead of the pack in the 1976 case of *Barnes* v. *Mac Brown & Co.*[4] Whereas *Theis* had involved a lawsuit between two parties to a contract, *Barnes* involved a suit between two parties who had no contractual relationship.

In *Barnes*, the plaintiffs bought a four-year-old house from the Shipmans, who had purchased it new from the builder. After moving into the house, the Barneses discovered that the basement leaked and that there was a large crack around three of the basement walls. It cost $3,500 to repair the basement. The Barneses sought compensation from the original builder-vendor.

The issue before the court was whether the builder-vendor's implied warranty of habitability would extend to subsequent purchasers. Most courts have refused to go beyond imposing the warranty of habitability on new homes sold by the builder. Few have extended the application of the warranty to used homes, even to those recently built. Because implied warranties are contractual in nature, the application of implied warranties in real estate transactions has generally been limited to the original parties to the contract. Underlying this limitation is the fear that a builder-vendor may remain subject to liability in perpetuity and may suffer liability for problems in a used home more related to the age of the house and normal wear and tear than to a defect that the builder could have prevented. Limiting the extension of warranty protection to the original purchaser has served as a convenient and easily applied cutoff point for courts. The Indiana Supreme Court, however, found the rationale of *Theis* equally applicable to subsequent purchasers.

The standard to be applied in determining whether there has been a breach of warranty is one of reasonableness in light of all the surrounding circumstances. The buyer must prove the existence of a defect that could not have been discovered through a reasonable inspection, which manifests itself after the purchase. A court will consider numerous factors to determine whether the warranty has been breached, such as the age of the house, the use to which it had been put, and its maintenance.

The extension of warranty protection to second buyers of used homes in *Barnes* represents a minority position that is followed by only a few other states. The limits of this doctrine were tested in the 1980 case of *Vetor* v. *Shockey.*[5] The Shockeys purchased a four-year-old home from Vetor, who had lived in the house for four years, but had not built it. When the toilets and the washer malfunctioned during rainy periods the Shockeys sued Vetor for breach of the implied warranty of habitability. The Indiana Court of Appeals refused to impose a warranty of quality on a nonbuilder of a used home. Whereas the public interest may be served by shifting repair or replacement costs to a builder who created the defect and is in a position to control the quality of construction and warn of any defects, the court decided that it is not served by imposing liability on a nonbuilding seller of a used home. In these circumstances the seller is not likely to have any greater expertise than the buyer. If the buyer is to recover in such a case, he must be able to demonstrate misrepresentation or fraudulent concealment on the part of the seller.

LANDLORD-TENANT

Traditional landlord-tenant law treated a lease as a conveyance of land, and assigned few obligations to the landlord. The landlord had the duty to turn over possession to the tenant and to refrain from interfering with the tenant's possession, but that was the extent of his duties. He made no implied warranties concerning the fitness of the premises for habitation, he had no inherent duty to make repairs and he suffered no liability if there was injury to the tenant or anyone else on the leased premises. Furthermore, so long as the tenant was not deprived of *physical* possession of the land, his obligation to pay rent was absolute, no matter how miserable the conditions of the leased premises might be.

The same social and economic forces that had caused the downfall of *caveat emptor* in sales transactions compelled change in landlord-tenant law. A 1971 case, *Weaver* v. *American Oil Co.,*[6] sounded the death knell of *caveat lessee* in Indiana, when the Indiana Supreme Court refused to enforce a fine-print exculpatory clause in a form lease on grounds that it was "unconscionable." The court made the statement that *"caveat lessee is no more the law than caveat emptor."* [7] It was several more years, however, before Indiana law recognized any inherent duty on the part of a landlord to lease housing that was safe and suitable for human habitation.

In 1976 the Indiana Court of Appeals considered *Old Town Development Co.* v. *Langford.*[8] Langford and his family had leased an apartment in a forty-unit apartment complex from the defendants. A fire broke out in the apartment one night. Langford was injured, his wife and children were killed, and all the contents of the apartment were devastated. Evidence showed that the fire was caused by the builder's placement of a furnace flue vent too close to combustible materials. Langford sued Oid Town, basing his complaint on breach of the implied warranty of habitability, negligence and strict liability in tort.

The Court of Appeals noted that the lease has been gradually transformed from a conveyance of land to an essentially contractual relationship, and that the application of the implied warranty of habitability in the landlord-tenant relationship was but a logical extension of the principles of *Theis, Weaver* and *Barnes.* When a landlord rents an apartment for residential use, he impliedly warrants that the leasehold is free of any latent defects that render it unfit for residential purposes and also that it will remain reasonably fit during the term of the lease. Breach of this warranty, said the court, renders the landlord liable for a full range of contract damages including damages for personal injury and property damage.

The *Old Town* court had said that this warranty was a duty "mutually dependent" with the duties of the tenant. That principle was further developed in the recent case of *Breezewood Management Co.* v. *Maltbie.*[9] In *Breezewood,* two Indiana University students leased an apartment in an older home for $235 per month on a one-year written lease. There were many defects in the apartment, including over fifty violations of the Bloomington Housing Code. These defects remained largely uncorrected, despite notice from the tenants and the city code officers. One tenant vacated the apartment three months early and refused to pay further rent. The remaining tenant refused to pay more than half the original rent. The landlord sued both for the remaining rent and other charges. The tenants counterclaimed for damages, the return of their security deposit, and an abatement of the rent. The tenants produced evidence to show that the reasonable monthly rental value of the apartment was $50 during cold weather and $75 during warmer weather. Affirming the view of a lease as a contractual relationship, the court treated the landlord's breach of the implied warranty of habitability as the breach of a contractual obligation. The tenants' duty to pay rent was thus conditioned on the landlord's duty to provide a habitable leasehold. The court also refused to enforce an "as is" clause in the lease on the grounds that it was unconscionable. As a result of its breach, the landlord was liable to the tenants for the difference between the value of the apartment as warranted and rental value of the apartment in its defective condition. The landlord wound up owing the tenants a total of $1,030 plus the return of their damage deposit.

SUMMARY

The series of cases from *Theis* to *Breezewood* strongly indicates the commitment of Indiana courts to accord a consumer almost the same degree of protection when he buys or leases residential real estate as when he buys or leases a car or a vacuum cleaner or any other item of personal property. Real property itself is being demystified. The trend is to treat the sale of real estate as if it were the sale of any other expensive product and the lease of real estate as a contract for a package of goods and services. Both sellers and lessors are now expected to convey property that will meet the consumer's reasonable expectations of quality.

The basic purpose of doctrines that increase the legal responsibility of sellers and landlords is to ensure their adherence to a standard of safe housing. In imposing liability for the failure to maintain such a standard, the law steps in to create an incentive that the marketplace might not otherwise create.

This does not mean, however, that unlimited liability will be visited upon anyone who sells or leases real estate. The implied warranty of habitability in the sale of real estate will not be imposed on the occasional, nonbuilding seller. As in the law of product liability, the subject of this enhanced liability will be the professional in the field, the developer or builder-seller. It is the real estate professional who is more likely than the consumer to have the expertise to avoid defects and the financial resources to bear and redistribute the costs of any injuries that occur. With the goals of loss prevention and redistribution in mind, it is likely that the extension of warranty protection to subsequent purchasers of recently-built homes will continue and will eventually become the law of most other states.

The legal vulnerability of Indiana landlords was greatly increased in the *Old Town* and *Breezewood* cases. The lesson of these cases is that a lessor of residential property risks his profit as well as potentially huge liability for personal injury if he leases property that falls below a standard of decent, safe living conditions. Both cases contain broad language that can be construed as suspending a tenant's obligation to pay rent upon the landlord's breach of the implied warranty of habitability. Rent withholding is an extreme self-help remedy, however, and it is likely that these cases will force the passage of legislation specifying the rights a tenant has to use his rent as leverage to gain a landlord's compliance.

Although these changes in the law have occurred in the past ten years, they reflect a slow process of bringing the law into focus with the realities of modern life. Consumer protection in real estate transactions is the inevitable byproduct of the needs of a mobile, industrial society. As such, the landlord, developer, and builder must be cautioned that the rule is no longer *caveat emptor*, but rather, *caveat venditor*—"let the seller beware"!

FOOTNOTES

1. Tudor v. Heugel, 132 Ind. App. 579, 178 N.E.2d 442 (1961).

2. 280 N.E.2d 300 (1972).

3. Wawak v. Stewart, 449 S.W.2d 922, 923 (Ark. 1970).

4. 342 N.E.2d 619 (Ind. 1976).

5. 414 N.E.2d 575 (In. App. 1980).

6. 257 Ind. 458, 276 N.E.2d 144 (1971).

7. *Id.* at 148.

8. 349 N.E.2d 744 (Ind. App. 1976).

9. 411 N.E.2d 670 (Ind. App. 1980).

New Federalism and Judicial Commitment to the National Interest

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Last year's ripples of anticipation have burst into jubilation among states' rights advocates as President Reagan has made clear his desire to revitalize the role of state and local government. Vowing to end federal interference in local affairs, the new administration hopes to reverse the flow of power and responsibility that has favored the federal level since the Great Depression.

The first step in this new partnership between Washington and the states calls for replacing categorical grants with flexible block grants. Categorical grants have been criticized as stifling local innovation since the federal government specifically dictates the purposes for which the money may be employed. The new block grants, effective October 1, 1981, will allow the various states to determine the priorities for distribution of the funds—something the nation's governors have long urged.

Reagan promises that his "new federalism" will go much farther than the revenue sharing so popular with the Nixon administration, for the block grant approach is seen as just the first step in a dramatic shift in federal-state relations. The President clearly envisions a return of whole functions to the states.

Decentralization of various governmental functions is already under way. During Senate confirmation hearings, Secretary of Transportation Drew Lewis indicated that decisions to increase highway speed limits would be left to the individual states. In the past, the states were threatened with a percentage loss of federal road funds based on the number of vehicles exceeding the 55-miles-per-hour limit.

Indiana's recent controversy with the federal Occupational Safety and Health Administration (OSHA) has provided further evidence of this decentralization movement. The State of Indiana, one of twenty-three states administering its own program under an alternative allowed by OSHA, has been severely criticized for conducting lax investigations since the program's inception in 1974. As a result, in one of the Carter administration's last official acts, the federal agency announced plans to assume control of the state program. However, in keeping with new Labor Secretary Robert Donovan's philosophical commitment to allow the states to control programs like OSHA, the present administration reversed the Carter order.

Organized labor has warned that this new era of cooperation between the state and federal government will seriously undermine enforcement of the law. But the OSHA decision, like the highway speed limit example, has allowed Washington to remove several thorns that have long tormented local officials. And in soothing these wounds they have also allowed the President to pursue another campaign pledge—reducing the federal budget. By returning Indiana's OSHA to state control the federal agency has been able to close three offices and trim its staff in the state from forty persons to eight. The decision to end the national speed limit allows the federal government to eliminate the $24 million used for enforcement of the national limit from the National Highway Traffic Safety Administration's annual budget.

The administration has assumed that the states will accept substantial revenue cuts in return for greater flexibility as to how the money may be spent. But this premise has caused alarm among numerous states' rights critics who already question the President's underlying assumption that state and local governments are more efficient and equitable in the distribution of public funds and services than the national government. Federal grants have been primarily responsible for the significant growth that has taken place in state and local governments during the past decade. Critics query how the states and municipalities, faced by severe dislocations in their budgets, will be able to respond to the demands of their constituents.

Much of today's social legislation was pioneered by the federal government rather than the states. Many groups question the commitment of the various states to continuation of these programs, especially in light of drastic reduction in direct federal assistance. Republicans and Democrats alike have resisted the administration's efforts to combine forty-four education programs with a budget in excess of $5 billion into two block grants. There was serious concern that inner-city and handicapped pupils would be shortchanged if the consolidation were implemented, thereby eliminating federal oversight. While some of this opposition may result from lawmakers' desires to claim continued credit for specific federal aid voted by Congress, the opposition to a return of whole functions to the states is real.

In view of these challenges to the commitment and capability of the states to respond to their constituents' demands, what could be the allure of the states' rights movement? It has been argued that the decentralization thrust is, in fact, an indication of the maturation of our political system. According to the theory, "governmental organization follows a modernization cycle similar to that observable in the organization of markets under the impact of advanced technology and communications: fragmentation followed by consolidation followed by differentiation."[1] After several decades of necessary centralization, people are demanding a more flexible participatory government. Irving Kristol suggests that the impetus behind the swing back to the states stems from a mounting anxiety about the fate of democracy in a mass industrialized society. The resultant upsurge of populism is attributable to the perceived gap separating people from their institutions. Thus there is a recognized need for "visible government" that accentuates the element of "participation."[2] Quite simply, people are trying to capture their lost sense of control by turning back to basic American devices. But with the complexities of modern society there is no turning back the clock; fragmentation will not satisfy the numerous demands of the people.

Recent opposition to proposed community development block grants by small-city advocates places the feasibility of a wholesale return of power to the states into proper perspective. Present plans call for handing to the states all community development grants for cities with fewer than 50,000 people. In the past the small cities worked directly with Washington in dispensing these federal funds. Local officials are now questioning the capacity of state government to efficiently administer the grants. They are particularly concerned that duplication of the administrative mechanism in each of the states will unnecessarily siphon off much of the already dwindling resources.

The infamous Sagebrush Rebellion, looming large in the eleven western states, illustrates several other weaknesses in a decentralized system that lacks national coordination. The controversy focuses on control over almost 200 million acres of land in the western half of the nation. States' rights advocates have demanded that the property be released from under the control of the Bureau of Land Management—an agency of the Interior Department—to the states. Interior Secretary Watt recently fueled the flames by stating that national parks lacking unique significance should be turned over to the local governments. Former Secretary of the Interior Cecil D. Andrus has derided this movement as a thinly veiled attempt to open up the land to questionable development with a "result [that] would be a thoroughly chaotic legal, economic, and resource management situation for all the Western states." In his view, "[i]t would hobble our national energy efforts and obliterate environmental programs."[3]

Citing both political and economic barriers to proper state management of the land and its resources the antistate forces have demanded continued national control. This leadership is seen as providing a broader perspective; one that would allow the property to be shared fairly among competing users in a complex, interdependent society. They see a coordinated effort, with final decisionmaking focused in Washington, as the best way to guarantee that the land is developed in the interest of community need rather than in response to the pressure of special interests.

The current debate over the much maligned Federal Clean Air Act illustrates a prime criticism of returning too much power to the states. While there has been widespread support among the nation's governors for greater authority over enforcement of the air pollution standards at the state level, some state officials have voiced strong opposition to complete abdication by federal authorities. Particularly the governors of the Northeast, fearing the downwind effect of increased use of coal in the Middle West, want to maintain firm federal control over the establishment of air pollution standards.

Balkanization might well nurture a free rider phenomenon that could reverse much of the social progress this nation has developed. In the pollution area some localities have already attempted to ensure their own air quality by requiring that tall smokestacks be built. The tall stacks prevent local pollution but allow the pollutants to blow over outlying areas. Further, one might expect an intense competition among the states to retain and attract industry. Tax incentives and a plethora of antilabor laws might be used as a lure. However, since recent tax revolts and diminishing federal assistance have already painted a bleak picture for local decisionmakers, drastic curtailment of governmental services might be the final result.

Perceiving the potential rivalries among the states and the increased vulnerability of local decisionmakers to overwhelming pressure from special interests, the judiciary has indicated a willingness to play a vital role in guaranteeing coordination between state and national interests. It does not appear that a Reagan Court will undermine the role of the national government as the coordinator. It is true that the 1980 Republican Party platform called for the appointment of judges whose philosophy "is consistent with the belief in the decentralization of the federal government and efforts to return decisionmaking power to state and local elected officials . . ."[4] But, it should be recognized that today's Court, the Burger Court, was largely fashioned by former President Nixon who nominated four of the current justices. A fifth, Justice Stevens, was appointed by Gerald Ford. These men were selected because of their strong belief in the concept of federalism and "perceptible concern with preserving the identity of the state government as a separate functional entity."[5] Accordingly they should provide an accurate barometer of the judicial climate in the 1980s.

In a series of opinions this avowedly states' rights Court has displayed a general pattern of broad deference to local governments' programmatic choices.[6] Upholding state laws in areas such as land use controls, public education financing, apportionment, public employment, and obscenity, the judiciary has strongly supported maintenance of the diversity of state and local institutions and interests. To the extent that states' rights advocates demand greater local control in these self-rule areas, they should expect little interference from the courts. However, the Court has shown a greater willingness to intervene when local government interferes with rights defined by Congress, thereby preserving the regulatory supremacy of the federal government. Further, state enactments that unduly burden interstate commerce will be struck down as inconsistent with the best interests of the national welfare.

This point was recently reaffirmed in *Maryland* v. *Louisiana*[7] when the Supreme Court overturned a Louisiana tax on offshore or imported natural gas flowing through Louisiana processing plants on its way to other states. Since the state gave its own people a variety of exemptions that substantially shielded them against the impact of the tax, the Court found it to impermissibly discriminate against commerce. Earlier in the year, in *Kassel* v. *Consolidated Freightways*,[8] the Court invalidated an Iowa regulation that prohibited the use of 65-foot double-trailer trucks within the state's borders. Since the law provided exemptions that allowed double-trailers to service Iowa's border cities, the Court was convinced that the statute was designed to secure to Iowans many of the benefits of large trucks while shunting to neighboring states many of the costs associated with their use.

Both the Iowa and Louisiana decisions indicate that even a states' rights Court will not subordinate the national interest to state and local decisionmakers. The judiciary, while favoring a constructive revitalization of the states, recognizes the key role the national government must play as coordinator in future endeavors. Accordingly, state regulations that are overly burdensome on interstate commerce or that conflict with national programs and policies will not survive judicial scrutiny. For the Court perceives the political and economic impediments to action in a fragmented system and phrases the real issue to be not whether to centralize or decentralize, but what are the appropriate functions of the various levels of government.

Of course, the states' rights movement may be just the tip of the iceberg. The more basic issue may be what is the appropriate function of government itself. Decentralization applied to government, if it is to truly address peoples' demands for control, must be more than another form of federalism. Rather than merely refining intergovernmental relations, the process might lead to a systematic policy of utilizing the nongovernmental institutions of society–the private sector–to implement governmental policies. This notion is already evidenced by programs like the EPA's "bubble concept," which grants businesses greater latitude in deciding how to comply with more generalized pollution standards. One might expect increased variations of these flexible performance standards instead of the narrowly-defined rules. Participation may run even deeper as the democratic form of government penetrates industrial life itself rather than remaining confined to the traditional political institutions. At an extreme, the movement could lead to production and investment decisionmaking by workers and consumers, not by individual capital owners or their managers.[9] Already we have witnessed the popularity of increased employee choice within the corporation in the form of flexible benefits packages. These programs provide employees with real alternatives as they allow people to pick and choose from a variety of benefits within a fixed dollar limit. As such, they address peoples' demands for more control over their lives.

The administration's intention of returning more and more functions to the states should address this growing need on the part of society for responsive institutions. Judicial oversight will assist in coordinating local wants with national needs. But in the future one might expect peoples' clamoring for participatory institutions to move beyond the political realm and further blur the line between public and private institutions.

FOOTNOTES

1. L. J. Sharpe, ed., *Decentralist Trends in Western Democracies* (London: Sage Publications, 1979): 3-4.

2. Irving Kristol, "Decentralization for What?" in Reeves & Glendening, eds., *Controversies of State and Local Political Systems* (Boston: Allyn and Bacon, Inc., 1972): 449-51.

3. C. Andrus, "The Attack on Federal Lands," The Wall Street Journal, December 5, 1980: 18.

4. C. Rice, "Ronald Reagan and the Supreme Court Issue," The Wall Street Journal, September 23, 1980: 26.

5. Ripple & Kenyon, "State Sovereignty–A Polished But Slippery Crown," Notre Dame Lawyer, Volume 54, 1979: 772.

6. M. Gelfand, "The Burger Court and the New Federalism," Boston College Law Review, Volume 21, 1980: 763.

7. 49 U.S.L.W. 4562 (May 26, 1981).

8. 49 U.S.L.W. 4328 (March 24, 1981).

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The New Economic Activism of the Burger Court

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A recurrent theme among conservative presidents stating criteria for potential Supreme Court appointees is their fidelity to the text of the Constitution and the intent of its framers. Richard Nixon stressed the need for "strict constructionists" in his 1968 presidential campaign. Reagan spokesmen sounded a similar note in discussing the search for a successor to retiring Justice Potter Stewart. What both were implicitly attacking in making such statements was the freewheeling judicial activism so prevalent during Earl Warren's sixteen-year tenure as Chief Justice. Yet the practice of judicial lawmaking is hardly limited to liberals, and it has characterized the Supreme Court's work ever since the beginnings of the Republic. In fact, two of the most blatant examples of nineteenth century judge-made constitutional law were in the service of business interests. Judicial activism in economic matters was supposed to have ended after the 1930s. But, despite some recent statements about its supposed deference to legislative policy, throughout the past decade the Burger Court has quietly been beginning the practice anew.

The approach advocated by Nixon, Reagan

and many others usually argues that constitutional decisions should be based on the literal text of the document itself, plus the debates and other constitutional history helping to explain the meaning of that text. Failing this, such people would contend, judges should adhere fairly scrupulously to past Court decisions interpreting the Constitution, and should be reluctant to break new judicial ground. This often, but not always, expresses a policy of judicial deference to the other branches of government. An "activist" approach, on the other hand, would tend to subordinate such technical legal considerations to moral commands of a supposedly higher order, changing societal values, the social needs of a particular time, perceptions about the direction of future progress, and so forth.[1] Usually, but not inevitably, such activism goes hand in hand with an expansive view of judicial power. Judges of the latter sort are rarely open about what they are doing, and one reason for this is that the techniques of "strict construction" allow much room for the exercise of discretion. The language of the Constitution is often quite abstract and vague. Aside from expressing some idea of equal treatment for equals, for instance, what does the Fourteenth Amendment's command that "No State shall . . . deny . . . the equal protection of the laws" really mean as applied to a particular legislative classification? Worse yet, strict constuctionist literalism can sometimes promote an "activist" posture toward other branches of government. By its terms, for example, the First Amendment appears to invalidate *all* laws abridging freedom of speech, and "liberal" Justice Hugo Black took just this position for many years.

In addition, the preenactment history of an individual constitutional provision is sometimes quite unclear, and it is not uncommon to see judges employing different portions of that history to reach widely disparate results. Past judicial decisions interpreting constitutional language may somewhat arbitrarily fix its meaning in cases where text and history leave this ambiguous, but it is theoretically possible for a subsequent judge to treat such decisions as "wrongly" decided and to go back to the original sources for his own reinterpretation. More importantly, the process of reasoning by analogy from case to case is an inherently flexible one leaving much room for change over time. Finally, even where text or history provide fairly unambiguous answers to constitutional questions, it is not always obvious that such received wisdom should guide the resolution of a present problem. Unless it is assumed that the framers provided a definitive set of answers good for all time, constitutional change may be necessary to accommodate developments unforeseen in 1787.[2]

Thus, it seems that the "strict construction" approach often cannot work with the promised certainty and predictability, and may not be an appropriate guide for action even where it does. As a result, it also does not provide an adequate basis for explaining the behavior of the Supreme Court. Speaking very generally, the personal predilections of the justices and their identification with certain established interests often go farther toward doing so. Contrary to some contemporary popular mythology, this observation cannot be limited to the Warren Court, and is not solely a twentieth century phenomenon. The nineteenth century Supreme Court was occasionally more than willing to confect constitutional doctrines benefiting business. Two examples should suffice to make the point.

Article I, section 10 of the Constitution states that "No State shall . . . pass any . . . Law impairing the Obligation of Contracts." Although the history of this "Contract Clause" is murky, its broad language was apparently intended to attack a relatively specific problem: post-Revolutionary War, state, debtor-relief legislation severely disadvantaging creditors on private contracts. However, in two famous early decisions–*Fletcher* v. *Peck*[3] and *Dartmouth*

College v. *Woodward*[4]—the Supreme Court headed by John Marshall extended the Contract Clause to include *governmental* contracts, grants and charters. This piece of judicial legerdemain had the practical effect of giving constitutional protection to corporate charters. Since such charters were "contracts" for purposes of Article I, section 10, their "obligations"—the rights and privileges they granted—could not be "impaired" by subsequent state regulation. For this reason, *Fletcher* v. *Peck* and *Dartmouth College* are generally regarded as having given a substantial boost to the infant corporate movement of the early nineteenth century. But their influence should not be overrated: they were only one factor contributing to this growth, and the constitutional protection they afforded corporations was diluted in various ways by later decisions.

A more blatant example of probusiness judicial activism, the "economic" version[5] of so-called "substantive due process", began late in the nineteenth century and lasted until the 1930s. The due process clauses of the Fifth and Fourteenth Amendments prevent the taking of liberty or property from a "person" without "due process of law." Traditionally, the term "due process" has had a largely procedural meaning, requiring that the legal mechanisms used when liberty or property is taken by government meet certain tests of fairness to the individual. It did not set criteria to determine when the legislation could take liberty or property, but only involved the modes by which such a prior determination could be enforced. An example is the requirement of a fair trial or hearing before certain deprivations can occur. Late in the nineteenth century, though, the Court began to interpret due process in such a way as to limit the *purposes* for which the legislature could act to take liberty or property. In this "substantive" view of due process, legislation interfering with liberty or property had to bear some "real and substantial" relation to a valid state purpose. Since corporations were "persons" for constitutional purposes and since "liberty" was held to include freedom of contract, substantive due process often served to check social legislation interfering with agreements between those free and equal contracting parties, the corporation and the individual worker. The Court's invalidation of various minimum wage or maximum hours laws is an example. Such laws, it would proclaim, restrict the contractual liberty of employer and employee alike; and also lack a sufficiently close connection with valid governmental goals such as worker health and safety. Such decisions were obvious instances of nonstrict constructionist judicial legislation. They had little precedent in the prior history of due process, and left the courts to determine what were "valid" governmental purposes and what legislative means possessed a "real and substantial" relation to their fulfillment. They also represented a business-influenced Supreme Court's attempt to stem the rising tide of social legislation. The doctrine was hardly an absolute bar to such legislation, but it was effective often enough to make a difference.

The "economic" version of substantive due process met its end late in the 1930s. Its demise might be attributed to several factors, but surely high among them was the perceived need for increased governmental regulation of the economy during the depression era. At this time, the Supreme Court began its great shift: deferring to the state and federal governments in economic matters, and staking out new ground in the area of personal liberties and individual equality. The latter tendency reached its peak during the Warren era, but it has also continued to influence Burger Court decisionmaking. That Court's 1973 abortion decision,[6] its increasing constitutional attacks on sex-based classifications,[7] and its tendency to uphold reverse racial preferences[8] serve as examples. But the Burger Court has also quietly begun to assume a more activist posture in economic matters as well, thus beginning a shift away from the Court's forty-year pattern of deference to government regulation of the economy. Not surprisingly, this has often involved an actual or potential boost to business interests. Three examples will illustrate these points.

In *First National Bank of Boston* v. *Bellotti,*[9] the Burger Court struck down a state law prohibiting corporate spending to influence the vote on referenda not involving the corporation's property, business or assets. Though the full scope of *Bellotti* is as yet uncertain, it obviously affords corporations some constitutional protection when they speak on matters of general public concern. In justifying this, the Court stressed the social interest in free and uninhibited discussion rather more than the expressive interests of the individual corporate "person." Critics of *Bellotti* have been quick to point out that the assets and communications skills possessed by large firms will enable them to dominate the national or local "marketplace of ideas", and thus to achieve a disproportionate influence over public policy. Whether this is correct or not, the decision surely is of *some* benefit to large corporations. And, by extending the First Amendment beyond its prior bounds and erecting a new obstacle to government regulation of business, the Court arguably was acting in an activist fashion in *Bellotti.*

"Commercial speech" such as advertising was generally regarded as not entitled to First Amendment protection prior to the 1970s. Thus, its regulation by government could then proceed with relative impunity. During the 1970s, though, the Court gave commercial speech a qualified form of First Amendment protection, subjecting regulation of advertising to a level of judicial scrutiny falling short of that applied to restriction of "full" First Amendment speech but requiring considerable justification nonetheless. In a few such cases,[10] the Court's new doctrine has apparently assisted consumers by breaking up state-sanctioned schemes of professional group price maintenance. But, though this is hardly much of an issue presently, the doctrine may eventually work to the benefit of corporations by assuring constitutional protection for the techniques by which they help create demand for their products.[11] Fantasizing a bit, the new protection given commercial speech might be useful to business if a Moral Majority-staffed FTC attempted to restrict overt and covert sexual incitations in television and magazine advertising.

Along with economic substantive due process, the Contract Clause had fallen into insignificance by the mid-twentieth century. But in two late-1970s decisions, the Burger Court has made it once again a significant part of the constitutional firmament. In one of these cases, *United States Trust Company* v. *New Jersey,*[12] it struck down New York and New Jersey's repeal of a bistate covenant promising Port Authority bondholders that revenues and reserves pledged as security for their bonds would not be used to subsidize mass transportation. In the other, *Allied Structural Steel Corporation* v. *Spannaus,*[13] it struck down Minnesota legislation requiring that certain corporations terminating operations within the state pay a "pension funding charge" designed to protect the pension expectations of employees who had worked for the corporation for ten years.[14] In a flat departure from prior Contract Clause case law, both decisions imposed very stringent tests of constitutionality for state legislation impairing the obligation of contracts. And under these tests it is the Court that will determine what count as important state interests and what legislation advances them with sufficient force to be constitutional. Both decisions were also more or less probusiness, or at least antiregulation, in orientation. In *U.S. Trust,* the Court explicitly favored bondholder security over the states' asserted need to advance their environmental, energy conservation and transportation policies by promoting mass transit. In *Spannaus,* it clearly valued the employer's limited pension plan contract obligations more than the protection of its employees' pension expectations. Neither decision, though, approaches the practical impact of economic substantive due process, since the Contract Clause has long been held not to affect legislation occurring *before* creation of a contractual obligation.

As the preceding discussion should suggest, "strict constructionism" is, by itself, neither a viable approach for Supreme Court decisionmaking nor an adequate means of explaining what the Court has often actually done. In particular, the judicial activism that conservatives have attacked over the past twenty years is not simply a Warren Court aberration and has often been used to advance business interests. Such activism, in short, is a game that judges of various policy views have played, and that has benefited different interests at different times. The Court's protection of business concerns has been emphasized here because it now tends to be neglected in public discussion of the judicial role, and because the Burger Court seems intent on reviving the practice. But it has also been argued that among the hidden beneficiaries of Warren Court activism were, for instance, labor, the media and the then-burgeoning public sector.

The preceding discussion should not be read as asserting that *all* of the Supreme Court's decisions can be reduced to the policy views of individual justices or the play of group interests, or that there have been no more or less consistent practitioners of judicial restraint. Nor is it to suggest that it is impossible to mount defenses for such deference. These defenses, though, must avoid too closely identifying restraint with strict constructionist techniques and overestimating the ease and predictability with which constitutional text, history and prior cases can be applied to current constitutional problems. Relatedly, defenders of what have been called the "passive virtues" would probably do well to avoid the escapist ancestor worship that typifies too much of the prevailing reverence for the intentions of the Founding Fathers. It is obviously one thing to draw upon the collective wisdom of a political tradition by judiciously employing the insights of its important spokesmen, and quite another slavishly to follow all of their real or imagined aims. Instead, the defense of restraint should (and often does) stress the problems created by uninhibited activism. Perhaps the most commonly mentioned defect of this approach is its undemocratic character. To the extent that judges second-guess legislation by imposing stringent tests of constitutionality to advance chosen values or benefit favored groups, they usurp what is usually regarded as the legislative function. And ordinarily they do so while lacking any claim to greater competence in deciding the public policy question at issue. Also, giving free reign to judicial predilections tends to undermine the predictability and stability that are central to the "rule of law" ideal. Advocacy of "moral" (as opposed to "legal") judicial decisionmaking must be regarded as severely deficient if it fails to include among the claims of morality judicial consistency and regularity. A policy of promoting justice in the individual case may not advance it systemically.

Such arguments, though, have only intermittently proven efficacious in restraining the Court, and there is little reason to think that they will be more persuasive in the future. As a sort of last resort, apostles of restraint point to the damage that may be done to courts if the public comes to perceive that judges are guided by little else than their group ties and/or their personal views on desirable public policy. The recurrent possibility that Congress will attempt to limit the jurisdiction of the federal courts is an example. But the history of the Supreme Court tends to suggest that this threat is a bit of a paper tiger. In fact, it is often claimed that the public and the legislatures are, if anything, more "result-oriented" than the judges themselves. Thus, all that would seem to be required for the successful practice of activist jurisprudence is a reasonable ability to cloak activist decisions in strict constructionist terms, coupled with a sensitive nose for the movement of public opinion and the balance of group power. And, in the present climate, this might go a long way toward explaining the Burger Court's recent activism in the economic realm.

FOOTNOTES

1. Some of these considerations, of course, may be inconsistent with each other. Changed social values, for instance, might be deemed immoral.

2. The formal constitutional amendment process is always an alternative possibility, but its difficulty of employment precludes its frequent utilization.

3. 10 U.S. (6 Cranch) 87 (1810).

4. 17 U.S. (4 Wheat.) 518 (1819).

5. Substantive due process has also been employed to advance values of a "personal" sort. The constitutional right of privacy, which is largely based on the due process clauses, is an example.

6. Roe v. Wade, 410 U.S. 113 (1973).

7. *E.g.*, Frontiero v. Richardson, 411 U.S. 677 (1973).

8. *E.g.*, Fullilove v. Klutznick, 448 U.S. 448 (1980); Regents of the University of California v. Bakke, 438 U.S. 265 (1978).

9. 435 U.S. 765 (1978).

10. Bates v. State Bar of Arizona, 433 U.S. 350 (1977) (attorney fee schedules); Virginia State Board of Pharmacy v. Virginia Consumer Council, 425 U.S. 748 (1976) (state ban on price advertising for prescription drugs).

11. However, the special protection given commercial speech will not be available where the regulation merely involves the time, place and manner of its statement; where it is false or fraudulent; and where the transactions such speech proposes are themselves illegal.

12. 431 U.S. 1 (1977).

13. 438 U.S. 234 (1978).

14. In *Spannaus*, the private pension plan in question generally prevented employee pension rights from vesting until well after ten years of employment.

Criminal Liability of Officers and Directors

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An examination of the legal environment of business must include a discussion of the potential exposure to criminal liability of officers and directors as they carry out their duties as agents of the corporation. In this context officers and directors are removed from the relative safety of the corporate organizational structure and face the criminal justice system and its sanctions of fines and/or imprisonment alone. To be sure, it is possible for the corporation to be charged with and found guilty of criminal conduct. However, this discussion will be confined to an examination of the instances of and potential for individual liability only.

To ignore the threat of criminal liability for behavior carried out in board rooms and executive suites is to ignore a fact of life in corporate America. Historically, criminal sanctions were rarely invoked against officers and directors except in instances of obvious fraud or abuse of the corporate structure. The civil liability that might also attach to conduct carried out on behalf of the corporation was considered a sufficient deterrent to meet social needs. In those instances where criminal liability was found to exist, penalties were often light—the proverbial slap on the wrist. Public sentiment has shifted to the point where minimal penalties for executives are not considered to have sufficient deterrent effect; rather they are considered indicative of the criminal justice system being "soft" on white-collar criminals. In addition, there is an emergent public awareness that punishing the corporation for illegal acts and not the individuals who cause the corporation to act illegally, does not strike at the root of the problem. As a result, state and federal law enforcement agencies are investigating white-collar crime with a vigor not experienced heretofore. Hiring practices, budget commitments, and investigative techniques are being modified within these agencies to accommodate the interest in white-collar crime. It behooves the officer and director, then, to be aware of the potential for criminal liability and to consider its consequences when acting for the corporation.

As a general rule criminal liability is personal to the wrongdoer. Unlike civil liability there is usually no means of spreading criminal liability to other passive entities such as employers or insurance carriers. The wrongdoer must bear the penalty if the punishment and the accompanying deterrent effect are to have any meaning. Criminal penalties are considered the most drastic of legal sanctions and, as such, are meted out deliberatively.

A criminal statute typically sets out a state of mind that the wrongdoer must possess when engaging in illegal activity in order for a crime to have been committed. If a statute defines first-degree murder as the intentional taking of another's life then the prosecutor must prove the state of mind of intent for the act of killing to constitute murder in the first degree. Other states of mind not considered as reprehensible as intent—such as knowledge, recklessness, and negligence—can be found in criminal statutes, and it is liability predicated on these states of mental culpability that this article addresses. The individual who is bound and determined to engage in criminal behavior for his or her own gain using a corporation as the means to perpetrate the crime is beyond the scope of the discussion. Nothing can be said to that individual who is fully aware of the nature of his or her actions, but who chooses to ignore the consequences. Rather, the focus is on the officers and directors who, by virtue of their positions in the corporation, may learn of others' criminal conduct or be in a position to prevent the corporation from committing a crime and what exposure that creates for them.

Utilizing a knowledge standard in most cases the Indiana General Corporation Law provides criminal penalties for officers and directors. One who knowingly issues shares in violation of the corporation law or who knowingly signs or issues a certificate for shares containing a false statement is guilty of a felony.[1] Similarly, a person knowingly violating state securities regulations is guilty of a felony.[2] One who is charged with the duty of maintaining a list of shareholders who fails to do so or one who denies access to the corporate books and records to a shareholder entitled to access may be charged with an infraction.[3] All of these statutes seem to require that the officers or directors have a consciousness about the character of their actions before criminal liability will be imposed. However, it would be unwise to assume that the less one knows about a situation the better the chances of avoiding criminal liability. Abdicating responsibility to a subordinate is not sufficient grounds for pleading ignorance. While officers and directors are justified in relying on experts' reports (an audited financial statement, for example), they are also charged with the duty of making reasonable inquiry into corporate affairs, especially those matters that fall within their own functional areas. A financial officer who signs a statement that the corporation has $1 billion in assets has the means, indeed the obligation, to verify that representation. The excuse that he or she took a subordinate's word for it does not constitute a valid defense. Statutes imposing a knowledge requirement can be brought to bear against the officers and directors who actually knew the statement to be false and those who reasonably should have known it was false.

Consider the case of the president and chief executive officer of Acme Markets. The corporation and the individual were charged with violations of federal food and drug laws. The corporation pleaded guilty and was fined, but the president stood trial on the charges lodged against him and appealed his case all the way to the U.S. Supreme Court.[4] He claimed that he could not be held personally responsible for the rodent infestation in two company warehouses. When he received notification from the federal inspectors of the infestation he was told by corporate counsel that the vice president for the region in which the warehouses were located would remedy the situation. When the inspectors returned several months later they found that the condition of the warehouse was improved but still showed signs of infestation. The criminal charges followed the second visit. The statute under which the corporation and its president, John R. Park, were charged specifically contemplates individual as well as corporate liability. It is a statute that creates a strict liability crime, which is to say no particular state of mind must exist for the statute to be violated. The public interest in assuring wholesome food and drugs outweighs any concern that the defendant be aware of or in some way cause the unsanitary condition. If there are rats in the warehouse the statute is violated without regard to how they got there. In affirming Mr. Park's conviction the U.S. Supreme Court did not seem to be imposing liability on him simply because he was president. Evidence adduced at trial showed that under Acme's bylaws the president had supervisory powers over most areas of the corporate enterprise, including sanitation. He was in a position to have done something about the unsanitary condition upon learning of its existence and did not.

The Court would not require Mr. Park to go to the warehouse and set the traps, but did require something more affirmative than passing the obligation to a subordinate. Perhaps a follow-up to the first communication or the institution of a reporting procedure would have sufficed. Park argued that he must depend on subordinates to carry out his many corporate duties. Considering the strong public policy underlying the statute, the Court was not moved to reverse the defendant's conviction on those grounds. The limits of *U.S.* v. *Parks* are unexplored. It does stand as a statement that criminal liability will be imposed for failure to exercise the power of oversight, at least in the area of regulatory crimes such as violations of pure food and drug laws.

Perhaps more familiar federal crimes that may be perpetrated by corporate executives are contained in the antitrust and securities laws. Certainly criminal charges brought under these statutes draw attention and notoriety to the defendants. Violations of these acts require a certain mental culpability; they are not strict liability crimes. However, it is not necessary that a defendant intend to commit a crime to be found guilty. Oftentimes the defendant's conduct is motivated by laudable concerns such as a desire to advance in the organization or to increase the firm's profits. Whatever the motives, conduct that is anticompetitive, such as price fixing, or that is violative of the securities laws, such as disseminating misleading information in connection with a purchase or sale of a security, is punishable. All are on constructive notice of the proscriptions of the statutes. The executive would be well advised to familiarize himself or herself and subordinates with the elements of the antitrust and securities crimes and refresh that knowledge on a yearly basis to prevent the possibility of overzealousness becoming criminal conduct.

In addition he or she must always consider the legal consequences of any policy or pattern of conduct before it is put into operation. What may seem wise from a marketing or financial point of view may have drastic consequences from a legal standpoint. Aside from the personal exposure to criminal liability, particularly under the antitrust and securities laws, the executive has an opportunity to prevent corporate liability as well. Any company has an official policy prohibiting its employees from engaging in anticompetitive practices or securities law violations. This official policy may be communicated by way of a memorandum or an agreement that the employee must sign. The executive is in a position to breathe life into the policy by conveying to his or her subordinates that the policy is vital. Many cases have found corporations and individuals guilty once it became clear that the official policy was merely window dressing and that employees were given subtle messages by their bosses that they had free rein to do what they felt was best. The executive puts the policy into practice; by making it clear that the policy is immutable and that those who fail to understand its importance have no future in the organization, he or she may be preventing a future indictment.

Officers and directors are extremely conscious of indemnification opportunities should they ever be held accountable for acts carried out on behalf of the corporation. Permissable indemnification plans vary from state to state and from corporation to corporation, and it is thus difficult to generalize. Most indemnification plans allow reimbursement to an officer or director for the costs of criminal proceedings. However, this indemnification is limited to instances when the defendant had no reason to believe that his or her conduct was illegal. A defendant who has been found guilty of a crime requiring mental culpability will be hard pressed to argue that he or she reasonably believed that the conduct was lawful. Failure to consider the legal significance of one's actions does not meet the test for indemnification; only a good faith belief that the conduct was not unlawful does. Perhaps the defendant in *U.S.* v. *Parks* could have argued a good case for indemnification from Acme, but a person who trades securities on inside information or who conspires with others to perpetrate a group boycott of a competitor would not. When a corporation does indemnify an individual it pays all costs associated with the lawsuit including attorney's fees, judgments and costs of appeals. When indemnification is not available these costs are borne solely by the individual along with the stigma of a criminal record and the almost inevitable dismissal from the firm should the defendant be found guilty.

A foreseeable use of the criminal sanction in the future may be to extract a social responsibility from white-collar defendants. Two events in the last few years seem to signal a consciousness that the criminal justice system with its penalties may be a means of inducing a heightened sense of responsibility to the public on the part of business and its executives. The first was the criminal trial of Ford Motor Company when the state of Indiana charged the company with reckless homicide after occupants of a Ford Pinto burned to death in a fire caused by an erupting gas tank. Ford had been found liable in civil suits brought by other plaintiffs and had been subject to investigation by federal agencies as a result of the Pinto design, but this suit sought criminal penalties, not damages. The jury ultimately acquitted the company when it determined that the prosecutor had not proved the state of mind of recklessness beyond a reasonable doubt.

The significance of the Pinto suit, however, lies not in the results but in the fact that charges were brought at all. A nagging question left by the verdict is whether the jury that could not find an organizational recklessness would have reached the same conclusion if the individual decisionmakers had been charged rather than the corporation. The message conveyed by the instituting of the lawsuit was that a product design decision that exposes users to a grave risk of harm may be subject to criminal penalties as well as the more traditional civil and administrative sanctions.

The second event that is symbolic of the use of criminal penalties to impose social responsibility on business is a bill introduced in the House of Representatives last session. The bill imposed fines of not less than $50,000 and/or imprisonment of not less than two years on an appropriate manager who discovered a serious danger associated with a product or business practice and failed to notify the appropriate federal agency and affected employees.[5] The bill was drafted in the wake of the Ford criminal proceedings and the controversy surrounding chemical waste disposal. Although the bill died in committee it stands as a reminder that interest in the use of criminal penalties against business practices injurious to the public has been piqued.

The two aforementioned instances present different examples of the future use of criminal proceedings against business activities. In the Ford Motor case the state charged the company with violating an existing traditional criminal statute that covers many types of behavior other than exploding gas tanks. In the second example a statute was proposed that would specifically address conduct within the business environment. Both stand as prototypes of the directions criminal liability of directors and officers may take.

While no policy or program absolutely insures insulation from liability, the foregoing would suggest that officers and directors should not only conduct their own business activities so that they comport with the letter and spirit of the criminal statutes to which they are subject, but should also undertake a program of aggressive oversight of corporate business for which they are directly responsible. In this way potential threats of criminal liability may be defused before they become actual violations. Liability prevention is an important aspect of business planning. The potential loss of liberty, loss of position, and public opprobrium that accompany conviction are drastic consequences to be considered and avoided through a diligent program designed to reduce the risk. Criminal liability for corporate executives is too great a threat to be ignored.

FOOTNOTES

1. Ind. Code § 23-1-10-3(a).
2. Ind. Code § 23-2-1-18.
3. Ind. Code § 23-1-10-3(b).
4. U.S. v. Park, 421 U.S. 658 (1975).
5. H.R. 4973.

Securities Regulation in the 1980s

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As Professor Metzger has pointed out in a preceding article, a useful study of law must include not only an examination of the present state of the law, but also a consideration of the social needs and values that provide the rationale for law. An understanding of the sociohistorical perspective of law enables the business person to anticipate changes in the law.

Such a sociohistorical analysis is especially important to an appreciation of the law of securities regulation. Securities regulation is based primarily upon perceptions of our society's needs in the 1920s and 1930s. The passage of time has proved that many of those perceptions were and remain flawed.

Let us begin with a history of securities law in the United States. Contrary to popular belief, the state governments pioneered in securities regulation twenty-two years before the first federal statute appeared in 1933. Designed primarily as investor protection schemes, the state securities laws (called Blue Sky laws) usually permitted the sale of only high-quality securities, that is, ones whose offerings were "fair, just, and equitable" to investors. Such a standard gave considerable discretion to state securities commissioners, who used the power liberally to deny to many entrepreneurs and businesses the right to sell securities. The underlying rationale of the statutes was that investors, who were generally unsophisticated in securities matters, were easily duped by slick securities salesmen, usually representing East Coast interests.

The Blue Sky laws prevented not only the sale of many risky securities, but also the offering of securities for worthwhile businesses. Although the statutes were overly restrictive, the states justified the results on investor-protection grounds. In addition, at least one state, Kansas, passed its Blue Sky law partly as a response to the large outflow of capital from Kansas to New York. In this respect state securities laws were a reaction to the era when an Agrarian West was bled by a Moneyed East.

When the federal government passed its first securities legislation, the Securities Act of 1933, Congress adopted a scheme dramatically different from the state statutes. Operating under the belief that given sufficient information an investor can decide the wisdom of investing his money in a particular business, Congress opted for a disclosure statute listing the data any offeror of securities must provide to prospective buyers. To encourage carefully considered purchase decisions the Securities Act of 1933 mandated a twenty-day waiting period during which only offers and no sales may be made, thus allowing the investor to make his decision free from the effects of high-pressure sales tactics.

Federal securities law ostensibly evinced two purposes. The first was the protection of investors, a purpose identical to that of the state Blue Sky laws. But while the state laws considered investors incompetent to make their own investment decisions, Congress believed that a fully informed investor could protect himself. The second purpose of the federal act was to restore investor confidence in the securities markets and, thereby, to preserve the market for capital formation. Largely due to the preeminent position of the consumer during the last fifty years of American law, the second purpose was subordinated to the goal of investor protection and often was forgotten when the Congress and the Securities and Exchange Commission passed new laws and regulations.

The Failures of Securities Regulation

Few regulatory schemes have failed so miserably yet survived so long as federal securities law. Nearly all of the disclosure required by the federal securities acts is irrelevant to investors. Based upon an historical cost accounting system, the disclosures are inaccurate predictors of future performance. Only recently and in very restricted form has the SEC permitted the disclosure of projections of financial performance in offering documents and annual reports.

What mandatory disclosure is made to investors is often old data. Already the market for investment information has disseminated the important data. If anything, the required disclosures operate as a verifier of the accuracy of earlier disclosures.

Most of the mandatory disclosures are not readable or understandable except by the most sophisticated of investors. Many investors do not read the disclosures, either because of the complexity of the disclosures or because the disclosure documents arrive after the investment decision has been made. These two indictments, that the disclosures are not readable or read, expose the myth of the informed layman. In fact there are few fully informed investors. Most people rely upon others to evaluate an investment and believe that since others are purchasing and recommending the security, it must be a good investment.

In light of the slight use of mandated disclosure, the cost is especially high. The expense of an initial offering of securities ranges from $300,000 to $1,000,000, an amount that must be added to the offering. For a small business this cost deters the making of a public offering and, thereby, inhibits small-business capital formation. When one considers that investors, the beneficiaries of mandatory disclosure, are not the neediest members of our society, the expense of mandatory disclosure seems especially high.

In addition, our scheme of regulating transactions in securities has not prevented some of the greatest securities scandals in our history. Thousands of people lost significant investments in the Penn Central and the Equity Funding debacles. Trading on inside information is rampant and largely undetected. It is not difficult to understand why the small investor has little confidence in the integrity of the stock market.

The Future of Securities Regulation

Viewing the failures of securities regulation, are we correct to assume that the law will change in the next several years? I think the answer is yes. Already modifications have been made to reflect changes in our perceptions of society's needs.

First, consider small capital formation. In the 1970s the Congress and the SEC recognized the importance of small businesses to the economic viability of our society. What followed were statutes and regulations increasing the ability of small business to raise capital publicly and to avoid the expensive Securities

Act registration requirements. The small-offering exemption was increased gradually to $2,000,000 from $100,000. A new rule, Rule 242, now allows a corporation to avoid even the low-level disclosure requirements of Regulation A. Last year Congress provided a new exemption for venture capital companies, permitting an offering to accredited purchasers of up to $5,000,000.

The trend favoring small-business capital formation is likely to continue. In the 1980s we should see greater cooperation between Congress, the SEC, and small business. The result will be the enactment of more innovative exemptions from securities regulation and an increase in the offering amounts exempt from regulation.

Closely associated with the grant of preferential treatment to small businesses will be the placement of greater responsibility upon investors and the market to protect investors. This trend is not necessarily a boon for offerors of securities. As investors increasingly rely upon the market to provide and to assess investment information, greater responsibility for truthfulness will be imposed on offerors and securities professionals. It is likely also that we will see an increased judicial acceptance of novel theories of liability.

Just recently, in late May 1981, the United States Court of Appeals for the Fifth Circuit held that a bond purchaser who did not actually rely on a misleading offering circular accompanying the bond offering may nevertheless recover for fraud from the seller under Rule 10b-5 on the grounds that he purchased the bond relying on the integrity of the securities market to establish the apparent genuineness of the securities.[1] The importance of the court's decision is its recognition of reality: investors often do not investigate a security independently, but they rely upon others in the market to research the security. The next logical step beyond this decision is the investor holding liable other market participants for erroneously valuing a security. This step is not likely to be taken in this decade, if ever. Probably, the decision of the Fifth Circuit also will be overruled as unjustified by the reading of Rule 10b-5. In addition few other courts will be willing to permit an investor to abdicate his responsibility to exercise due diligence in his own affairs.

An area in which we are likely to see much talk but little change is insider trading. New SEC Chairman John Shad has emphasized his intent to reduce the level of insider trading, but there are two reasons why insider trading will not abate significantly. First, most investors are hypocritical on insider trading: it is evil when someone else does it, but proper when we do it. This inconsistency is due in part to the abnormal profits that trading on inside information may produce, which interfere with our sense of morality. Second, insider trading is largely undetectable. The novice may be caught, but the experienced trader knows how to interrupt the connection between the insider and the trader, making tracing nearly impossible. No market surveillance program can probe the mind of a trader or otherwise prove that he possessed insider information. Insider trading is a market inequity that we cannot eliminate.

Potential for change exists in the disclosure policy of securities, yet it is unlikely to occur. Despite widespread criticism of securities disclosure Congress and the SEC seem committed to maintaining the present disclosure system as a means of protecting investors. Only one factor will lead to a change in disclosure policy and that is a greater recognition that investor protection concerns must be tempered by concerns for fostering capital formation. We will reach a point at which our nation's need for capital will exceed our interest in investor protection. We are nearer that point today than ever in the history of securities regulation, yet we will not progress far enough in the 1980s to witness a significant change in securities disclosure policy.

A Final Note

The purpose of this article has been to impress upon you that our law is not capricious, but instead is dictated by community and economic conditions of the past and present. Additionally it is nearly impossible to impose a law upon a society that is unwilling or unready to accept it. An implication of this relation between law and society is that we are bystanders in the legal process, that is, lawtakers, not lawmakers.

That observation is partly true. As lawtakers we must accept the law and adapt to it. By increasing our understanding of the relation between law and society, we will improve our ability to accept and to anticipate changes in the law.

But we are lawmakers also. While we cannot in the long run force an unacceptable law upon an unwilling people, we can amend laws that, because of changes in our society or distorted visions of our society, are not compatible with society's best interests.

FOOTNOTE

1. Shores v. Sklar, 647 F.2d 462 (5th Cir. 1981).

The Seller of Goods Under the Bankruptcy Reform Act

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The state-by-state passage of the Uniform Commercial Code ("Code") in the middle of this century created many difficult conflicts with the 1938 Bankruptcy Act. This was especially true with respect to an old and continuing bankruptcy problem: the rights of a party who sells goods to an insolvent buyer, is not paid, and risks losing the goods or their value after the buyer goes into bankruptcy. The passage of the Bankruptcy Reform Act in 1978 has eliminated some, but not all, of these problems. This article will briefly examine the legal position of such a seller under the Bankruptcy Reform Act. It will discuss only the most significant legal options available to him.

Credit Sales

A party who sells goods on credit and is not paid will, of course, be able to sue the buyer for their price. Where the buyer is insolvent and goes into bankruptcy, however, this remedy will often be of little use to the seller because he will be reduced to general creditor status and typically will recover only a few cents on the dollar, if that. Where the credit seller discovers that the buyer has received goods while insolvent, though, he may be able to *reclaim* them under Code section 2-702 if he makes a proper "demand" within ten days after they are received by the buyer. What constitutes an adequate demand is very unclear. Some courts have treated a mere oral demand, e.g., a telephone call, as sufficient. Others have said that some attempt to regain possession is necessary. In any event, the ten-day demand requirement does not apply where the buyer has made a written misrepresentation of solvency to the seller within three months before delivery of the goods. Still, the seller must actually rely on the written misrepresentation in making the sale, and must also act with reasonable prudence in doing so.

Section 2-702, it might be noted, is merely the Code's reenactment of the common law remedy of rescission[1] for fraud. Prior to the enactment of the Code, it was almost universally true that where the seller could prove the numerous elements of a successful fraud claim he would be able to recover the goods from the bankruptcy trustee. Section 2-702 expressly blocks any recourse to pre-Code law, but under that section the seller has not fared so well in bankruptcy as his pre-Code predecessors did. For some twenty years prior to 1978, the 2-702 seller's ability to recover from the trustee was a matter of immense confusion. Bankruptcy judges and referees employed various provisions of the Bankruptcy Act to defeat the credit seller, and higher federal courts, while generally favoring the seller, did not eliminate these efforts entirely.

In order to resolve this problem, Congress enacted section 546(c) as part of the Bankruptcy Reform Act. Section 546(c) is a mixed blessing for the credit seller. It basically establishes his section 2-702 right to recover in the bankruptcy context. And, overriding 2-702, it also allows the seller to utilize some pre-Code fraud theories as a means of recovery. But, in either case, it toughens section 2-702's tests somewhat. The sale must be in the ordinary course of the seller's business, possibly excluding bulk sales and sales by a nonmerchant from receiving section 546(c)'s protection. More importantly, the section requires that the seller make a *written* demand for the goods within ten days of their receipt by the buyer and says nothing about section 2-702's "written misrepresentation" exception to this requirement. Despite this tougher demand requirement, section 546(c) should eliminate almost all of the reclaiming credit seller's prior problems in cases where its tests are met. But it fails to deal with the seller who meets *section 2-702's* requirements, but fails to satisfy *section 546(c)'s* somewhat different standards. For instance, what happens where there has been a written misrepresentation of solvency by the buyer, and the seller, as allowed by section 2-702, does not make a demand at all? Section 546(c) could be read as an "all or nothing" provision blocking the seller's recovery in such cases. On the other hand, it may merely leave the seller in the position he occupied prior to the Bankruptcy Reform Act, where he confronted a trustee armed with numerous potential bankruptcy weapons for defeating his claim. For all of these reasons, the credit seller's compliance with section 546(c)'s written demand requirement is very important.

Cash Sales

One possible option for a seller wishing to avoid the problems discussed above is to deal with the buyer on a "cash" basis. A cash sale is basically one where the parties agree that title to the goods will pass only upon the buyer's payment of the price. At common law, this included the simple deal where the buyer actually paid cash, sales where the buyer paid by check, over-the-counter sales, and self-service store sales. Because title to the goods did not move until payment was made, the cash seller usually had little trouble recovering against the trustee where the buyer failed to pay and then went into bankruptcy. In effect, the goods never became the buyer's property and thus could not become part of the assets subject to the trustee's control.

The Code generally reenacts the common law "cash sale" doctrine. Under the Code, however, section 2-702's ten-day demand requirement almost always applies to cash sale reclamations. This can prove very disadvantageous to the seller in "bad check" cases because the ten-day period may well elapse before he will become aware that the check has bounced. As was the case with the Code credit seller, the Code cash seller attempting to recover goods sold to a bankrupt buyer had mixed chances of success. Many of the protrustee arguments employed in 2-702 cases also were employed to defeat the cash seller under the 1938 Bankruptcy Act.

The position of the reclaiming cash seller under the Bankruptcy Reform Act is uncertain. In yet another sin of omission, section 546(c)'s drafters did not make clear whether that provision extends to the cash seller. If the cash seller is *not* included within 546(c)'s coverage, all the prior Bankruptcy Act problems are likely to reappear in much the same form. If, as is more likely, section 546(c) *does* cover the Code cash seller, many of the difficulties raised above with respect to section 2-702 will confront the cash seller. In any event, it is extremely important that the unpaid cash seller make a demand as soon as he discovers the buyer's insolvency–in writing if at all possible. Because of the problems this will often pose in bad check cases, and because of the cash seller's uncertain position under the Bankruptcy Reform Act, the "cash sale" strategy may not prove especially useful to the seller attempting to protect himself when dealing with buyers of doubtful solvency.

Withholding Delivery and Stoppage in Transit

In certain relatively infrequent situations, the seller dealing with an insolvent buyer may be able to protect himself against loss of the goods in bankruptcy by withholding delivery or stopping the goods while in transit. The Code allows the credit seller to refuse delivery except for cash when he discovers the buyer's insolvency. If the buyer fails to pay cash, the seller can continue to withhold delivery. Also, the Code permits the seller to withhold delivery where the buyer fails to make a payment due. In our situation, this should benefit only the seller who delivers in several installments. Where the goods have already been shipped but have not yet reached the buyer, the seller can stop them in transit once he discovers the buyer's insolvency.[3] However, reasonably prompt notice must be given to the carrier, and the right to stop goods in transit terminates fairly quickly.

Under both the common law and the Code, the seller who successfully withheld delivery or stopped the goods in transit defeated a trustee asserting a claim to such goods after the insolvent buyer went into bankruptcy. There is little reason to think that there would be a different result under the Bankruptcy Reform Act. However, as a practical matter the seller's use of such strategies will be infrequent. They usually depend upon a quick and well-timed discovery of the buyer's insolvency. In the case of stoppage in transit, fairly prompt notice to the carrier is required, and the period during which stoppage can occur is fairly limited. Moreover, both options tend to be of practical use to the seller only where he is delivering on an installment basis.

Perfection of a Security Interest

In view of the problems presented above, the safest course for the seller dealing with buyers of uncertain solvency is to obtain a perfected security interest in the goods sold. This would be what the Code calls a "purchase money security interest." The purchase money security interest is the current version of the pre-Code conditional sale, in which the seller typically transferred possession to the buyer but retained title as security for the price until he completed payment. The two necessary (but not sufficient) conditions for the seller possessing such an interest to defeat the trustee are called *attachment* and *perfection.* Attachment involves those steps that must be taken for the security interest to be valid *against the debtor.* Perfection involves those steps necessary for the security interest to be valid *against third parties* such as the bankruptcy trustee.

In order for a purchase money security interest to attach, there must be a written security agreement granting the creditor (the seller) a security interest in the collateral (the goods sold), signed by the debtor (the buyer). Perfection of a security interest typically involves filing a *financing statement* in the appropriate place of record. However, the Code allows a purchase money security interest in *consumer goods* to be perfected without filing–effectively, upon attachment.[4] Consumer goods are goods used or bought for personal, family or household purposes. It is important to note that the status of the goods as consumer goods is determined by the use to which they are put by the buyer. If the seller sells a refrigerator to be used in a home, the refrigerator will qualify as a consumer good, but if it is sold to a wholesaler for resale or for use in an office, this will not be true.

From the above, it would seem that the creditor/seller who perfects his interest before bankruptcy would always be safe from trustee attack. There are at least two situations, however, in which a purchase money security interest perfected within the ninety days preceding bankruptcy may be declared a "preference" and invalidated by the trustee.[5] The principal purpose behind the act's preference provision is to prevent transfers of the debtor's assets to favored creditors before bankruptcy. First, the Reform Act, like the Code, gives the purchase-money-secured party a ten-day grace period within which to perfect. If such a party fails to perfect his interest within ten days from attachment, his security interest is likely to be treated as preferential and he will not recover the goods from the trustee. Second, a credit seller who deems himself insecure and takes out a perfected security interest to cover a *preexisting* debt should also be vulnerable to the trustee if this occurs within ninety days of bankruptcy. This would be true even if the seller perfects within ten days of attachment, so long as the actual debt occurred before attachment.

Thus, the seller desirous of maximizing his protection when dealing with buyers of doubtful solvency should get the buyer to sign a proper security agreement at the time of the sale, and file a financing statement immediately–or, at the latest, within ten days. However, if the sale involves goods to be used for consumer purposes by the buyer, filing should not be necessary. In nonconsumer goods cases, the failure to file within ten days will severely imperil the seller's chances of recovery from the trustee. Finally, security interests taken out *after* the sale are not likely to assist sellers if they occur within the ninety-day preference period. Compliance with such procedures may be inconvenient, but they afford the seller the most complete protection against loss of the goods in bankruptcy.

FOOTNOTES

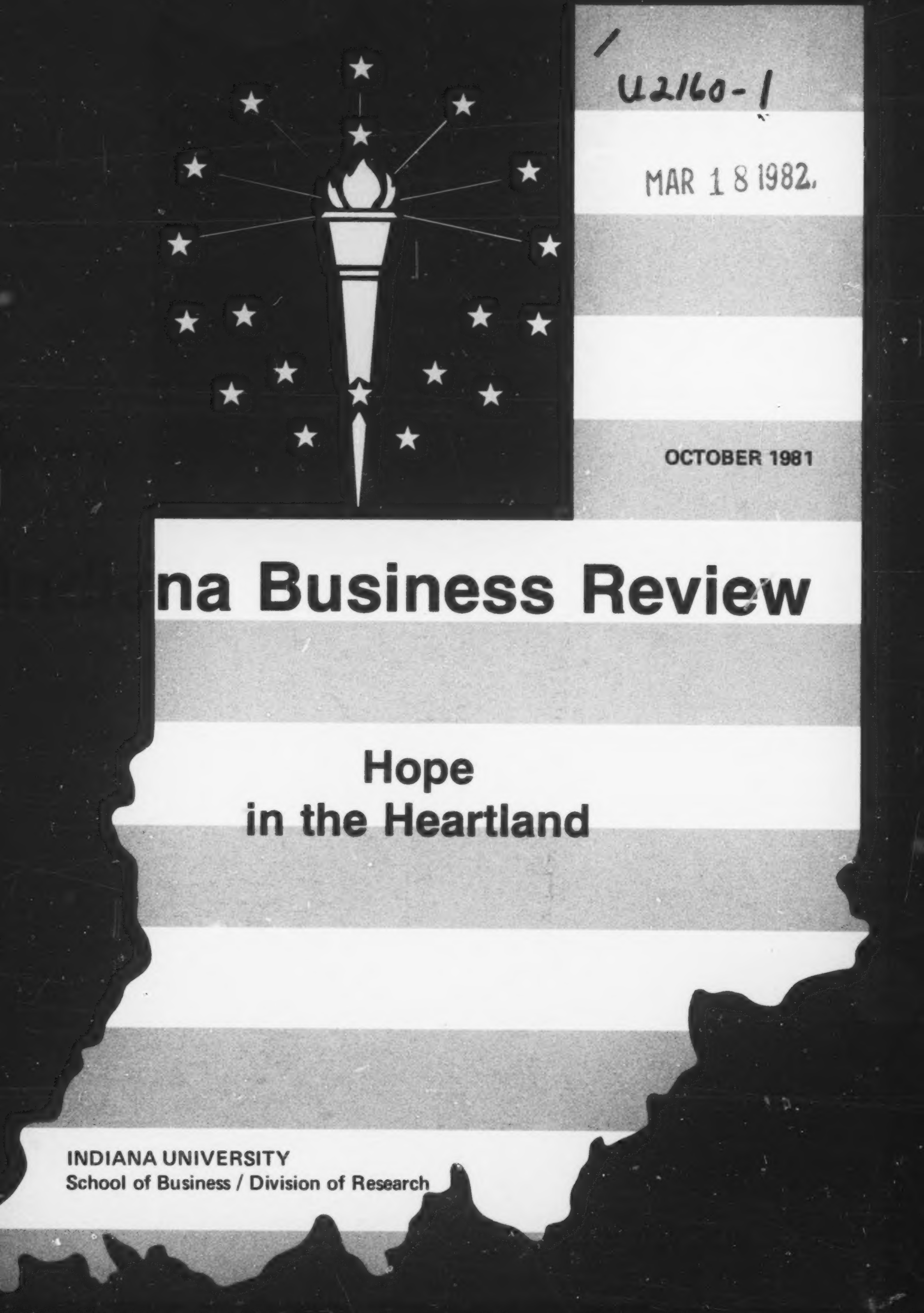
1. Rescission might be defined as a remedy whereby the court takes the completed deal apart and restores the parties to their original precontractual position. Here, where the buyer has not paid, this would simply mean that the seller could reclaim the goods.

2. The seller may have other Code remedies in this case also. See U.C.C. 2-703.

3. In addition, where large shipments (truckload, carload, planeload, etc.) are involved, the seller can stop delivery in a larger range of situations. For smaller shipments, though, only discovery of the buyer's insolvency will trigger the right of stoppage. The reason for this distinction is to protect carriers against the burdens which would result if the seller had the right to stop small shipments for reasons other than the buyer's insolvency.

4. One purpose of this provision is to prevent the rash of filings a contrary rule would create. But section 9-302(1)(d) specifically states that filing *is* necessary for a motor vehicle required to be registered.

5. The ninety-day period may be extended to one year where the security interest is given to certain "insiders."



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na Business Review

Hope
in the Heartland

INDIANA UNIVERSITY
School of Business / Division of Research

HOPE IN THE HEARTLAND
A Message from the Dean

On September 24, 1981, the School of Business conducted a colloquy for Indiana business executives on the economic conditions of the state and the Great Lakes region. This event was part of the dedicatory ceremonies for our new classroom/ office building in Indianapolis. The following papers present a sample of the discussion and concern expressed at that conference.

Recent economic events have highlighted the changes of the midwestern economy. National publications have given dramatic testimony to the extent of those problems without the balanced appraisal of two added forces:

1. Economic affairs often contain self-correcting counter forces, and
2. Efforts by individuals, firms, institutions, and governments can alter the course of events.

We believe that the trends which are documented in the following pages are subject to reconsideration. The personal attachment of individuals to their homes and communities, the dynamics of the marketplace, and the intervention of governmental agencies can have profound consequences.

The papers offered here are reflective of the commitment to the heartland that constitutes our best hopes.

Schuyler F. Otteson, Dean
School of Business
Indiana University

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Hope in the Heartland

JACK ENGLEDOW

Professor of Marketing, Indiana University, School of Business

The trends and events that we will be discussing here today are regional in scope. They are macro in nature. They involve thousands of organizations, millions of individuals, billions of dollars–and rather long periods of time. And we'll be looking at them primarily from that scope. But I'd also like to take a look at the same phenomenon from a bit more personal approach.

I'm a local boy–as we Hoosiers say, "born and raised here in Indianapolis." Consequently, I have what, I'm sure, is a very provincial–a much more emotional than rational–attachment to the area. You know, I like it here.

My tongue is deeply scarred from a lifetime of trying to be civil to people from other parts of the country who come in here and talk to us about "Indian-no-place", about the world's largest lighted cornfields, and other pleasantries. And yet, you know, I've been interested to note that a surprising number of those people make a deep sacrifice and manage to settle in and spend a lifetime here among the corn shucks with us. I graduated from high school and attended college here in central Indiana. I've found that a very large proportion of my friends and acquaintances from those times have also settled in this part of the country. Many of those people are now at, or near, the top of organizations that are very important in this community. I guess the moral here is that my contemporaries have found that Indiana is a very good place to live a life, to make a living, and to run a store.

During the last couple of years the children of my friends, my children, and the friends of my children have married. We've had some fairly pleasant summers watching brides go up and down the aisle and drinking bubbly.

But at the end of this past summer it dawned on me what was happening to these young people after the wedding. The daughter of a friend joined her husband in the South. He had quit his job here and moved on to what he thought was a better opportunity. The son of a friend graduated from Purdue and took a very fine job with a firm near San Francisco. Another friend's son, who has an MBA from a very respected institution, searched for about seven months here in this area then found an excellent opportunity in Ft. Worth. The son of another friend moved with his new bride to southern California. In the last two years then, from a very close-knit group of about seven couples that we spend a lot of time with, nine of our children have moved out of the state, six of those to the Sunbelt.

On top of that, two of my very best friends, who are entrepreneurial types, looked around, did not particularly like what they found, and at the age of fifty packed up bags and baggage and moved to southwestern Texas.

Suddenly what the cold statistics have been telling us for a long period of time came to me in a very personal, very important kind of a way. The children, and perhaps even a disproportionate number of the brightest and the best of those children, are leaving. And I think that there's mounting evidence that this generation and the business organizations that they are joining are much less likely than we have been to find this a good place to live a life, to make a living, and to run a store.

This distressing conclusion is another way of looking at the basic reason why we're here. The title of this colloquy is *Hope in the Heartland.* That's a value judgment. It suggests that if the above distressing conclusion is true, it's at the very least reversible. We're assembled here in a brand new building that represents a sizable commitment by this university, and by the schools that inhabit the building, to the future of this area. The positions of responsibility that you hold, and your own personal records in many cases, indicate a similar kind of commitment. It's entirely appropriate that we're here as representatives of the university, of a business school, and of a business community to talk about the future of the heartland.

To set the stage for the discussion for the rest of the day, three of my colleagues, chosen because they are respected commentators from their own areas of the academic world, would like to give you some specific comments with regard to their own areas. Howard G. Schaller, Professor of Business Economics and Public Policy and Executive Associate Dean of the School of Business, would like to give you a summary and an overview of some of the statistics and some of the economic data that had been prepared by our Division of Research. J. Fred Bateman is also a Professor of Business Economics and Public Policy and is chairperson of that department. Fred is a noted business historian and would like to give us some perspective on the history of the Midwest, and also the history of regions that have hit similar kinds of economic problems in their development. Harvey C. Bunke is a Professor of Business Administration in the School of Business and is also the editor of our publication *Business Horizons.* He would like to pinpoint some specifically nettlesome areas in the economy, to talk about some specific problems, and then to pose some very tough questions for us.

Trends in the Heartland

MORTON J. MARCUS

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POPULATION GROWTH

Actual growth in population for the nation, the Great Lakes states (Ohio, Indiana, Illinois, Wisconsin, and Michigan) and the state of Indiana peaked in the 1950s. Each area grew by fewer persons in the decades ending in 1970 and 1980 than in the booming 1950s.

In the 1950s, Indiana's growth of 728,000 persons was equal to 2.5% of the growth in the national population. In the 1970s, however, Indiana captured only 1.4% of the nation's growth. If the state had kept its 1950s share of population growth, in both the 1960s and the 1970s, there would be an additional 323,000 persons in the state today.

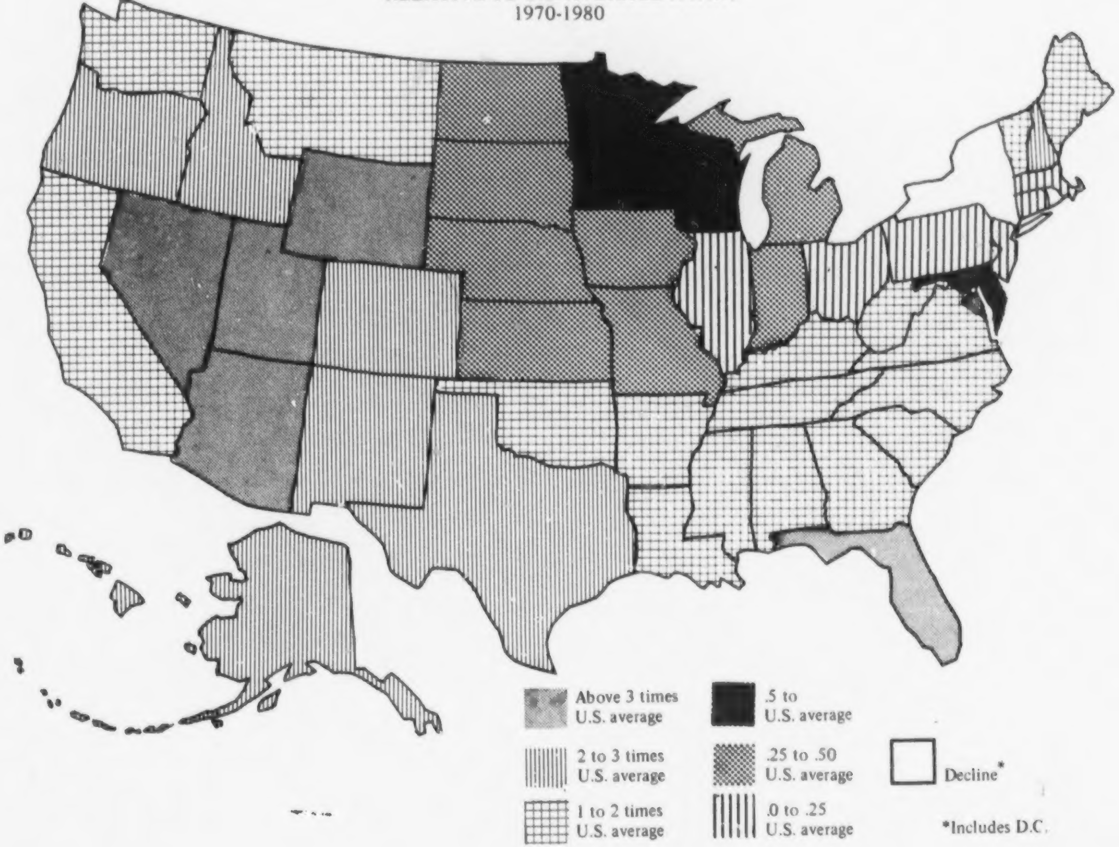
Indiana's growth in population for the 1970s was 296,000 persons, 59.3% slower than the peak decade of the 1950s. The Great Lakes states added 1,415,000 persons, or nearly 76% less than in the 1950s. The national slowdown in population growth was 25.4%.

Figure 1 shows that each state in the Great Lakes area grew in population in the decade of the 1970s, but all grew less rapidly than the national rate of increase, 11.4%. As a group the Great Lakes states grew by 3.5% for the decade with Wisconsin leading at a 6.5% rate. Indiana's growth rate (5.7%) ranked second among Great Lakes states but was only half the national rate of increase.

DIFFERENCES IN POPULATION GROWTH RATES

For every decade of this century, Indiana has had a slower population growth rate than the nation. As shown in Figure 2, the national rate of population growth is set at zero and the difference of Indiana and the Great Lakes states from the national rate of growth is shown. In the decades ending in 1920 and 1930 the Great Lakes exceeded the national rate of growth, while Indiana grew more slowly than the national rate. In the 1940s and 1950s both Indiana and the Great Lakes region grew at roughly the same rate and approximately

Figure 1
PERCENTAGE CHANGE OF POPULATION
RELATIVE TO U.S. AVERAGE (11.4%)
1970-1980


Above 3 times U.S. average
2 to 3 times U.S. average
1 to 2 times U.S. average
.5 to U.S. average
.25 to .50 U.S. average
.0 to .25 U.S. average
Decline*
*Includes D.C.

matched the nation's growth rate. In the decade of the 1960s and 1970s Indiana outperformed its sister states in the region.

PER CAPITA PERSONAL INCOME

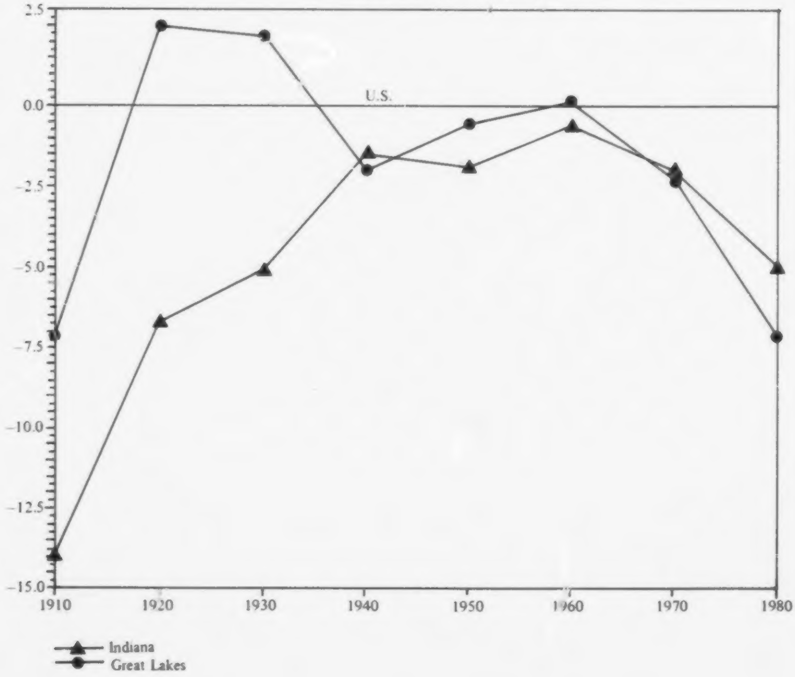
Figure 3 shows per capita personal income for Hoosiers in 1980 was $8,936 or 94% of the national average. Indiana's per capita personal income has not matched the national average since 1969 and in 1980 was at its lowest level relative to the nation since 1941.

With the exception of 1961, per capita personal income in the Great Lakes has exceeded the national average since 1929. Both Indiana and the Great Lakes peaked, relative to the nation in 1954, at the end of the Korean War.

CYCLICAL SENSITIVITY

Differences in quarterly percent changes in total personal income are one indicator of cyclical sensitivity. When the U.S. economy

Figure 2
PERCENT DIFFERENCE IN GROWTH RATES RELATIVE TO U.S.
(decade ending in years shown)



shows a strong rate of growth, a very cyclical state will show an even stronger rate of growth. When personal income growth in the U.S. is sluggish, a highly sensitive state will have a yet slower rate of growth.

Figure 4 shows that Indiana is a very sensitive state compared to the nation's business cycle. The chart is calibrated in years, but the data are plotted for each quarter from the second quarter of 1958 through the first quarter of 1981.

In general, when the nation's personal income advances, Indiana advances faster; when the nation slows, Indiana not only slows but sometimes falls back. The chart shows percent change in nominal dollars, that is, not adjusted for inflation. In no quarter since 1958 has the nation failed to have some positive advance in nominal personal income. But eight times in that period Indiana has had actual declines in nominal personal income.

Figure 3
PER CAPITA PERSONAL INCOME, INDIANA AND GREAT LAKES, AS A PERCENT OF U.S.

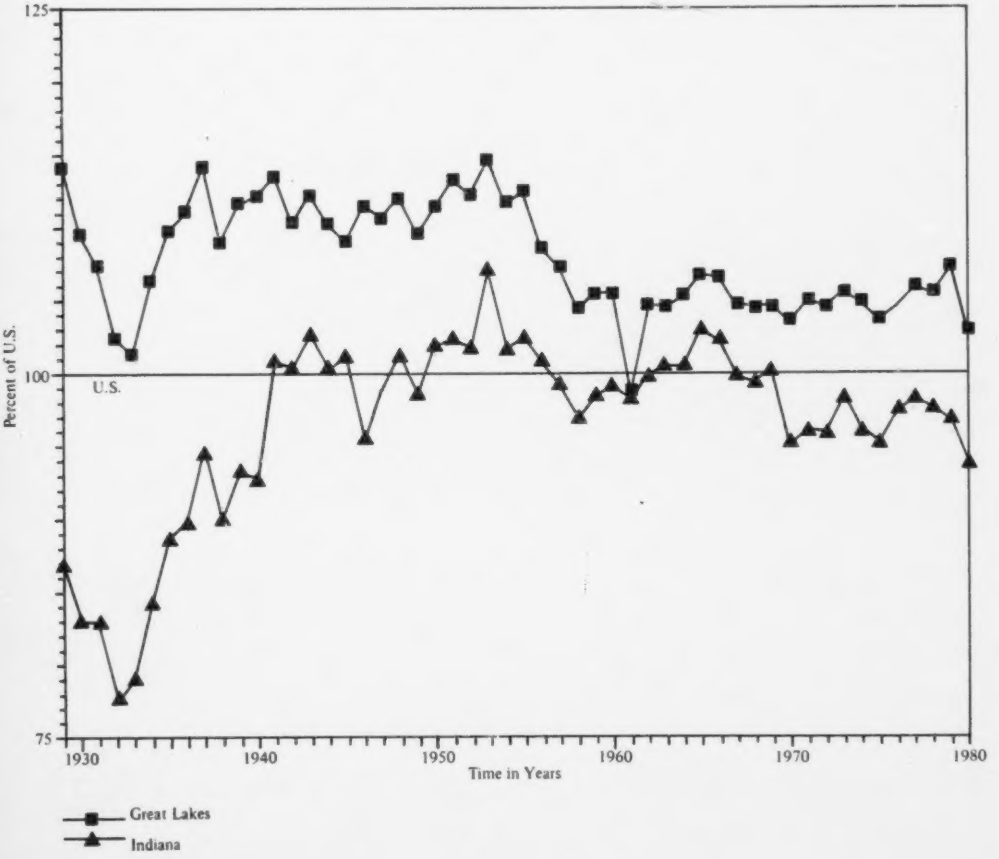
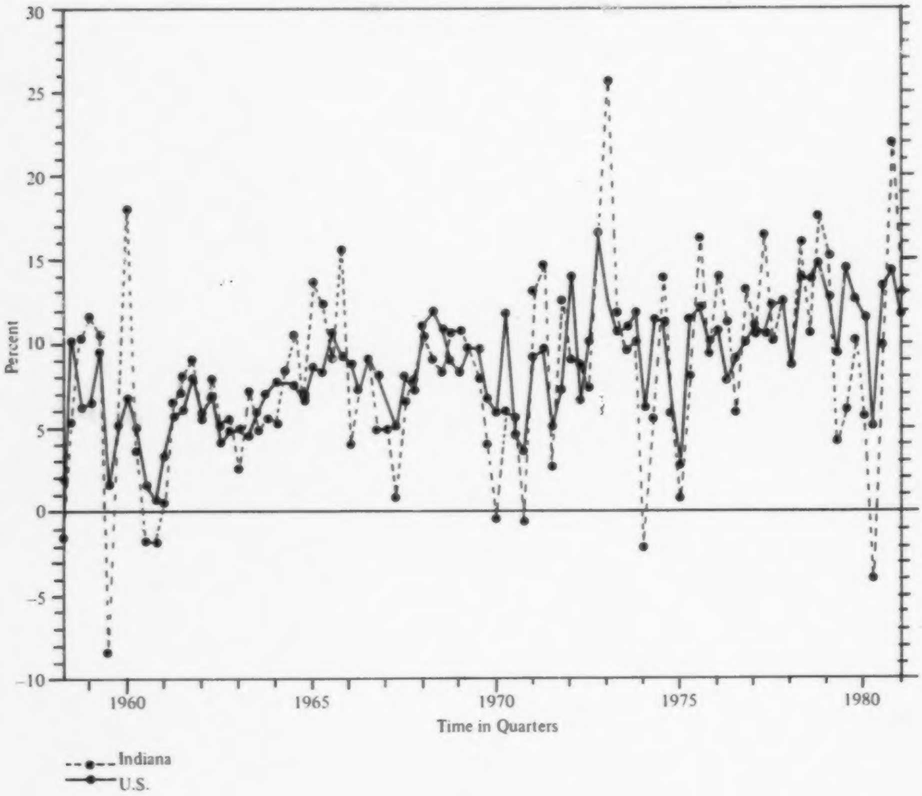


Figure 4
QUARTERLY PERCENT CHANGE OF
PERSONAL INCOME FOR INDIANA AND U.S.



STRUCTURE OF EARNINGS

Manufacturing accounted for nearly 41% of the earned income of the people of Indiana in 1979. (See Figure 5A.) For the Great Lakes, manufacturing generated nearly 37% of earnings, and for the U.S. 26%. (See Figure 5B and 5C.)

For the nation, the region and the state, the relative importance of manufacturing has declined since 1969. But the decline in the importance of manufacturing has been less in Indiana than in either the region or the nation. An industry's relative importance is measured by its location quotient. Manufacturing's location quotient in Indiana in 1979 was 1.56 (equal to 40.7% divided by 26.1%); this represented an increase from 1969 when the location quotient for manufacturing in Indiana stood at 1.47. In other words, Indiana has become more specialized as a manufacturing state in the past decade. The same conclusion can be drawn for

Figure 5A
STRUCTURE OF EARNINGS
FOR INDIANA, 1979

		1969	1979
▩	Farm, Mining, & Other	4.7%	3.8%
▥	Construction	6.6	6.1
▦	Manufacturing	42.4	40.7
▤	Trans., Comm., & Pub. Util.	6.0	6.8
■	Wholesale & Retail Trade	14.6	14.9
░	Finance, Insurance & Real Estate	3.9	4.3
▩	Services	10.5	12.2
□	Government	11.3	11.2

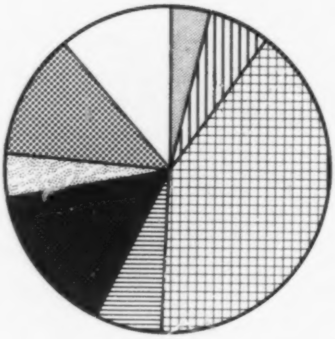


Figure 5B
STRUCTURE OF EARNINGS
FOR GREAT LAKES, 1979

		1969	1979
▩	Farm, Mining, & Other	2.9%	3.3%
▥	Construction	6.5	5.5
▦	Manufacturing	39.6	36.9
▤	Trans., Comm., & Pub. Util.	6.8	6.9
■	Wholesale & Retail Trade	15.9	15.6
░	Finance, Insurance & Real Estate	4.3	4.8
▩	Services	12.6	14.7
□	Government	11.9	12.3

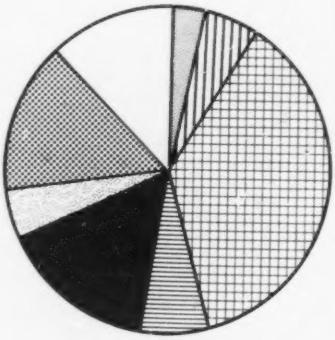


Figure 5C
STRUCTURE OF EARNINGS
FOR U.S., 1979

		1969	1979
▩	Farm, Mining, & Other	4.6%	4.6%
▥	Construction	6.2	6.1
▦	Manufacturing	28.6	26.1
▤	Trans., Comm., & Pub. Util.	6.9	7.7
■	Wholesale & Retail Trade	16.5	16.6
░	Finance, Insurance & Real Estate	5.3	5.8
▩	Services	15.0	17.1
□	Government	16.7	16.0

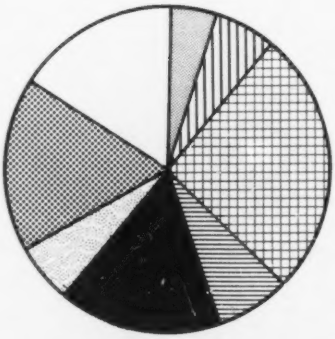
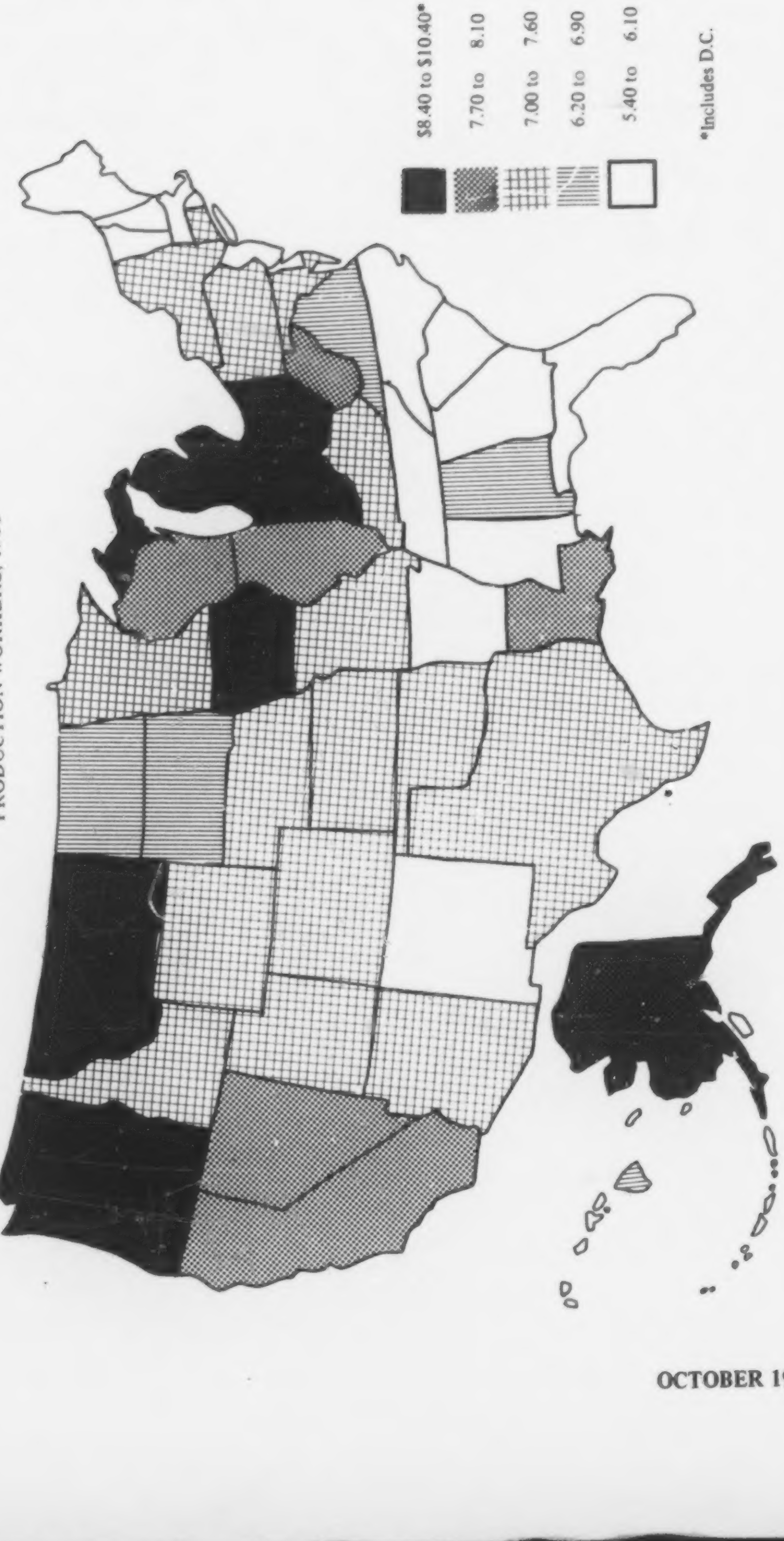


Figure 6
AVERAGE HOURLY EARNINGS OF
PRODUCTION WORKERS, 1980


■ $8.40 to $10.40*
▩ 7.70 to 8.10
▦ 7.00 to 7.60
▤ 6.20 to 6.90
□ 5.40 to 6.10
*Includes D.C.

the entire Great Lakes region.

AVERAGE HOURLY EARNINGS

Production workers in Indiana averaged $8.48 per hour, or 17% more than the national average. (See Figure 6.) The mix of industries, the amount of capital, and the skill of the workers all contribute to this disparity in earnings across the nation. All of the Great Lakes states exceed the national average of $7.27 for 1980 by at least 10%.

VALUE ADDED PER DOLLAR OF WAGES AND NEW CAPITAL EXPENDITURES PER DOLLAR OF WAGES

Value added per dollar of wages in Indiana manufacturing is below the national average. Since the mid-1960s this measure of productivity has been declining.

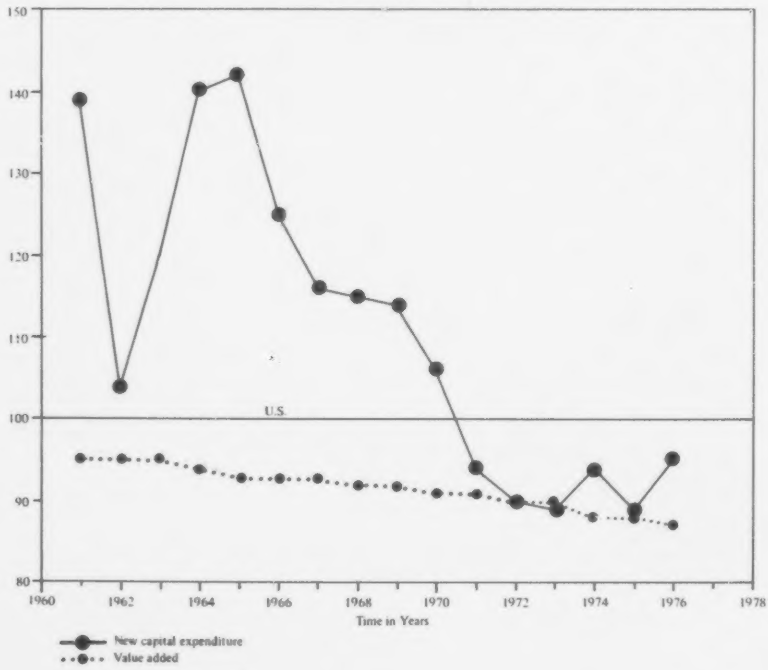
Figure 7 shows Indiana data as a percent of the national average. The figures are three-year moving averages to reduce year-to-year volatility and to identify the trend.

Productivity, and ultimately wages, of manufacturing workers depends on capital investment. In the 1960s Indiana was above the national average in attracting capital for manufacturing. (See Figure 7.) Since the mid-1960s the trend has been downward and the state has slipped below the national average.

MANUFACTURING STRENGTHS

Indiana is highly specialized in manufacturing.

Figure 7
VALUE ADDED BY MANUFACTURER PER DOLLAR OF WAGES AND
NEW CAPITAL EXPENDITURES PER DOLLAR OF WAGES
OF PRODUCTION WORKERS, INDIANA/U.S.
(3-year moving average)



Hoosiers represent 3.5% of all manufacturing employment even though they account for only 2.6% of the nation's total employment.

Figures 8 and 9 depict a classification of Indiana's manufacturing industries. The vertical center line separates the slow growing industries **within** the manufacturing sector. The period of time is 1973 to 1978. Growth is measured in terms of employment, not output.

The horizontal center line separates those industries that exceed Indiana's average specialization in manufacturing. Those above the

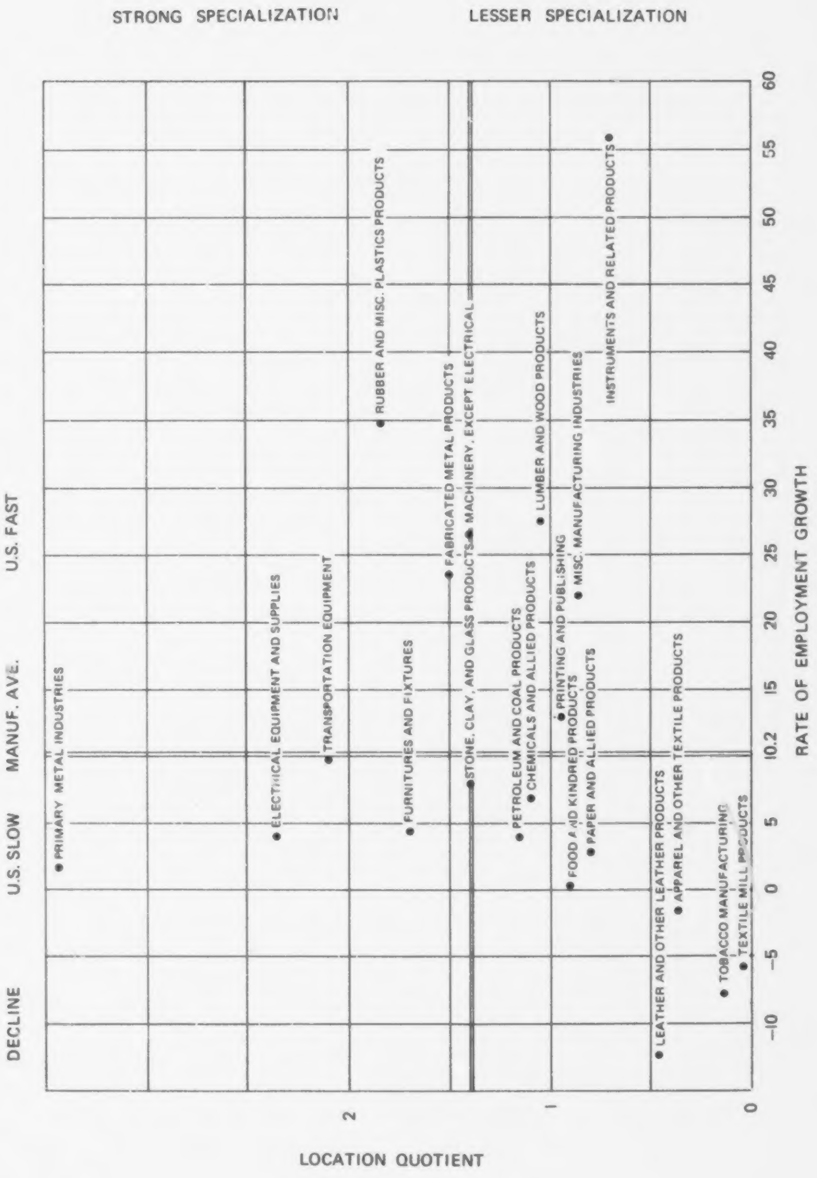
Figure 8

Classification of Indiana Manufacturing Industries

	SLOW GROWING	FAST GROWING
STRONG SPECIALIZATION	Primary Metal Industries *Secondary nonferrous metals* Electrical Equipment and Supplies *Electrical industrial apparatus* *Communication equipment* *Electronic components and accessories* *Miscellaneous electrical equipment and supplies* Transportation Equipment *Railroad equipment* Furniture and Fixtures *Office furniture* *Partitions and fixtures* *Miscellaneous furniture and fixtures*	Rubber and Miscellaneous Plastic Products *Plastic products* Fabricated Metal Products *Metal cars* *Metal forgings and stampings* *Metal services, nec.* *Miscellaneous fabricated metal products* Machinery, Except Electrical *Engines and turbines* *Construction and related machinery* *Special industry machinery* *General industrial machinery* *Office and computing machines* *Refrigeration and service machinery* *Miscellaneous machinery, except electrical*
LESSER SPECIALIZATION	Stone, Clay and Glass Products Petroleum and Coal Products Chemicals and Allied Products Food and Kindred Products Paper and Allied Products Leather and Leather Products Apparel and Other Textile Products Tobacco Manufactures Textile Mill Products	Lumber and Wood Products *Wood containers* *Millwork, plywood and related products* *Logging camps and logging contractors* Printing and Publishing *Periodicals* *Books* *Miscellaneous publishing* *Commercial printing* *Manifold business forms* *Printing trade services* Miscellaneous Manufacturing Industries *Engineering and scientific instruments* *Mechanical measuring control devices* *Optical instruments and supplies* *Watches, clocks and watchcases*

Figure 9

CLASSIFICATION OF INDIANA MANUFACTURING INDUSTRIES



line, therefore, are the industries in which the state is most specialized. Specialization in industries below the line is less strong.

PROJECTED GROWTH IN REAL EARNINGS AND EMPLOYMENT

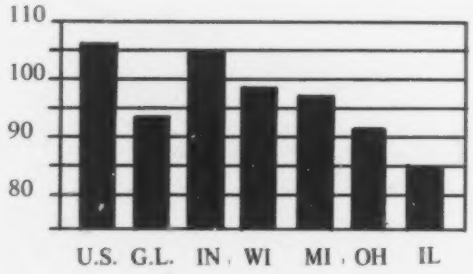
Real earnings in the United States are projected by the U.S. Bureau of Economic Analysis to grow 106% from 1978 to 2000. In the Great Lakes region, however, real earnings are projected to grow only 94% over the same period. Leading the Great Lakes states will be Indiana, where real earnings are projected to grow 105%, or just slightly slower than the nation. (See Figure 10.)

During the same twenty-two year period, employment in the United States is projected to grow 29%. The Great Lakes region, which is projected to grow only 22%, once again trails the nation. Michigan, at 28%, is expected to be the Great Lakes leader in employment growth. Indiana's projected growth in employment is second among the Great Lakes states at 22%.

PROJECTED SHIFTS IN REAL EARNINGS AND EMPLOYMENT

Column one of Table 1 shows the amount of real earnings and number of employed in Indiana for various broad industrial classifications for 1978.* The second column shows the

Figure 10
Projected Growth in Real Earnings and Employment


Percentage Growth in Real Earnings (1978 - 2000)

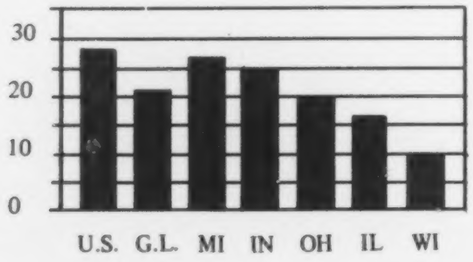

Percentage Growth in Employment (1978 - 2000)

TABLE 1
INDIANA
(Earnings in millions of dollars; Employment in thousands of persons)

	1978	Projected 2000	Projected Change	Shift
TOTAL				
Earnings	*22,088*	*45,388*	*23,300*	*– 89*
Employment	2,482	3,098	616	–116
Agricultural Services				
Earnings	*45*	*76*	*31*	*– 15*
Employment	8	9	1	– 2
Mining				
Earnings	*142*	*370*	*228*	*56*
Employment	9	14	5	3
Construction				
Earnings	*1,319*	*2,769*	*1,450*	*13*
Employment	130	174	44	6
Manufacturing				
Earnings	*9,251*	*17,905*	*8,654*	*–385*
Employment	747	877	130	– 32
Nondurable				
Earnings	*1,787*	*3,185*	*1,398*	*– 92*
Employment	171	191	20	– 5
Durable				
Earnings	*7,464*	*14,720*	*7,256*	*–617*
Employment	576	686	110	– 38
Transportation				
Earnings	*1,487*	*3,162*	*1,675*	*5*
Employment	117	143	26	1
Wholesale Trade				
Earnings	*1,150*	*2,329*	*1,179*	*63*
Employment	110	138	28	– 5
Retail Trade				
Earnings	*2,086*	*4,046*	*1,960*	*– 81*
Employment	410	513	103	– 43
Finance, Insurance, Real Estate				
Earnings	*931*	*2,213*	*1,282*	*73*
Employment	106	153	47	– 5
Services				
Earnings	*2,626*	*6,894*	*4,268*	*353*
Employment	412	608	196	– 6

Table 1, continued

	1978	Projected 2000	Projected Change	Shift
Government				
Earnings	*2,514*	*4,746*	*2,232*	*219*
Employment	359	403	44	– 11
Federal, Civilian				
Earnings	*482*	*874*	*392*	*31*
Employment	40	45	5	2
Federal, Military				
Earnings	*82*	*130*	*48*	*0*
Employment	27	27	0	0
State and Local				
Earnings	*1,951*	*3,742*	*1,791*	*135*
Employment	292	331	39	– 19

level these are expected to reach by the year 2000. The third column shows the absolute change in real earnings and employment projected over this twenty-two year period. Column four shows the shift in concentration into or out of each industry for the area in question as compared to the nation. That is, according to column three in Table 1 total employment in Indiana is expected to grow by 616,000 workers between 1978 and 2000. However, employment in the nation is expected to grow faster than in Indiana, and if the state were to keep up with the national rate of growth, it would have to grow by 116,000 more workers than projected. Hence, Indiana is projected to have a *negative* shift in its share of the nation's employment of 116,000 workers. Indiana is projected to grow slower than the nation in real earnings and is expected to lose $89 million in real earnings to other, faster growing states by the year 2000.

Most notable among the industries contributing to Indiana's decline in real earnings and employment relative to the nation is the durable goods industry. If Indiana were to grow at the national rate in this industry, the state would provide 38,000 more jobs and $617 million more income by the year 2000 than is projected. Retail trade is also expected to grow much more slowly in Indiana than in the nation. While there will be 103,000 new jobs in retail trade in Indiana by 2000, this will be 43,000 short of growing at the national rate.

Offsetting some of these losses will be the mining industry, where Indiana is projected to grow faster than the nation, adding 3,000 jobs and $56 million more jobs and real income. In addition the service industry is expected to add $353 million more income to the state than if Indiana grew at only the national rate in service industry.

FINAL NOTE

Projections and trends are not immutable efforts by public agencies and private firms can reverse trends and develop a more positive future. These trends do alert us to where we are headed without such efforts.

*Real earnings in the U.S. are *projected* by the U.S. Bureau of Economic Analysis.

Insights on the Heartland

I.

HOWARD G. SCHALLER

Professor of Business Economics and Public Policy; Executive Associate Dean, Indiana University, School of Business

The set of charts that you have received depict trends in a number of series describing the economies of the Great Lakes and Indiana. I'd like to make four observations drawn from these data.

First, it is obvious that population, employment, and, to some extent, per capita income have not grown as fast in the region and Indiana as they have in the nation. However, these three variables have not declined in the absolute as is sometimes mistakenly believed. There are more people living and working in the region, and their real per capita income is higher than ever.

Second, these declines relative to the nation actually started in the late 1950s and early 1960s. Contrary to popular misconception, they did not originate in just the last few years. The dramatic difficulties in the automobile industry in recent years are simply an exaggeration of long-term trends.

Third, there are two principal forces behind these relative changes of the past few decades: dependence on manufacturing of durables and public policies. By the end of World War II the region and Indiana were highly dependent upon the manufacturing of durables. As a result the seven recessions—and we may be in the eighth one—since World War II have had a more devastating effect on this region and this state than on the nation as a whole. Moreover, fighting inflation with high interest rates has also affected us more than the nation. The second cause of the relative declines has been public policies. These public policies were not aimed at the Midwest but they did stimulate faster growth elsewhere. For example, the TVA and other power programs, the Central Arizona Project and other irrigation projects, have spurred growth outside the Midwest. The rise in the importance of military and space programs has stimulated more growth elsewhere than in Indiana. It could be that the influence of these policies will diminish in the future.

My fourth observation from the data is that the forces described have left us with a good base but with some structural problems. We have more people and more persons in the labor force than ever, and we have become a high-wage economy, which can be good. However, we seem to have a structural problem, because the value added per dollar of wages and the plant and equipment expenditures per dollar of wages are declining in the state relative to the national average. The nub of our problem is the same as that of the nation only more so. We need to encourage investment.

Finally, let me draw your attention to Figure 2, on per capita personal income. Jobs and employment are certainly important, but the well-being of the citizens of the state also depends very much on their incomes. I would much rather have the lower population and employment figures and per capita income of Indianapolis than I would similar figures, say, for Calcutta. That's, of course, an exaggerated analogy, but the per capita incomes are important. I think we sometimes dwell a little too much on population. Figure 2 presents per capital personal income in the state as a percentage of the United States per capita personal income. All those numbers are percentages. I make four observations from the table. One, the state has not done too badly compared to the nation over the last two decades. Second, decline relative to the nation has centered in the metropolitan areas. The nonmetropolitan areas have held their own. Third, some metropolitan areas have held their own or even improved in Indiana: namely, Evansville, Terre Haute, Kokomo, Lafayette, and the Calumet area. The fourth observation is that the *relative* declines are centered in Indianapolis, Ft. Wayne, South Bend, Elkhart, Muncie and Anderson. In other words, I think that some of the state's problems can be pinpointed to certain industries in certain areas.

II.

J. FRED BATEMAN

Professor of Business Economics,
Department Chairman, Indiana
University, School of Business

I am going to expand a bit from the local issues. My feeling is that this is not just a regional problem, it is part of a national transition, and you cannot really understand what is happening in the state or in the Midwest unless you understand what's happening in the entire United States.

If as a nation we have difficulty comprehending the dimensions of the postindustrial society that we are supposedly entering, it is to some extent the result of our failure to understand the industrial one we presumably are leaving behind. Despite the attention historically accorded accomplishments of the American industrial complex, we know relatively little about how it all began, how the earliest stirrings of industrial change emerged and survived and ultimately produced the modern national economy. Recently investigators have begun to look at this issue, and gradually we are learning a little more about how the American industrial complex started nationally and how regions differed in their responses to economic opportunities.

Many important new insights have come from this recent research. For example, let me take one that I want to carry through the discussion. Each period of transition in the past to a larger and more encompassing geographic market size has produced a major shock to the political, economic and social structure. Highly localized markets emerged early in the nineteenth century, and in the overwhelmingly agricultural economy the problem of urban agglomeration accelerated. Businessmen sought new methods of finance, marketing, and production. They faced, for example, critical shortages of labor that constrained their output goals, particularly in the East. Consequently, new immigration policies, innovative labor practices, and improved banking institutions emerged. But the businessman remained largely a local figure, one recognized and respected by his community. As the century wore on, however, greater stresses developed as local markets expanded to regional ones, producing one of the most trying and hectic periods of economic adjustment in U.S. industrial history. This was an era of substantial turmoil and produced such political philosophies as Populism, which was centered here in the Midwest, where the suspicion of big business was strong. The trend toward national markets quickly followed, producing a twenty-year period of intense industrial competition, falling industrial and agricultural prices, the final dominance of mass production in the factory system, the creation of such new American developments as a managerial heirarchy to control these new enterprises, and ultimately it produced the Interstate Commerce Act and the Sherman Act. By the turn of the century America was transformed into the industrial leader of the world, with much of that industrial strength concentrated here in the Great Lakes area. The age of steel had begun and the Midwest was at the very center of it. As a historical change it was costly but it was swift.

In the economic sphere and in many other ways the twentieth century seems calm and orderly by comparison. The essential industrial structure was set by World War I: markets were oligopolistic and the Midwest was the manufacturing heartland. We have been resting on our structures every since. The era of American economic and political dominance in the world permitted us to refine and develop this formidable productive monster that was the U.S. economy in the years following World War II. If we take the historical perspective, however, it seems reasonably clear that that period is over and that we now live in a time that historians, looking back, will neatly label "the end of an era," but that seems so fuzzy and confusing to those of us who are actually living through it. This transition may have begun as early as the 1950s; clearly it was underway by the 1970s. It is still underway, and by *Forbes* magazine at least, it is seen as "trouble in the heartland."

What has caused this disruption? Let me suggest the obvious in continuing the line of argument above. Since World War II our economy has been evolving from a secure cocoon of a large and rich national market that fostered our development during the century after 1870 into an international market. At first, this change was not so evident and Americans reacted, as they have historically, by resisting international involvement in a way that few nations could. But by the 1970s, it was evident that our economy was in yet another of its great transitions. Old ways of doing things, in production, finance, marketing or whatever, had become outmoded and adjustments were necessary.

The development of American business in international markets has had particular impact on these traditional industries of the Midwest—especially automobiles and steel—but is not, of course, the only reason that economic adjustments need to be made in this area. Any region characterized by dependence on production of durable goods, which are subject to high price and income elasticity—they are highly responsive to changes in income or prices—will obviously suffer cyclical distress in an economy characterized by simultaneous inflation and stagnant or declining income levels. One could hardly write a more depressing script even for an otherwise healthy economy and need look no further to find a villain than these basic and impersonal economic forces. I would hasten to add, however, that neither OPEC nor the

Japanese have helped this situation.

Consider still another complicating factor in our evaluation of the Midwest economy and even of the American economy as a whole. Most Americans, especially those who are in positions of power in business and government and other areas, tend to use as their benchmark for judging our economic performance that period from 1945 until the early 1970s. There is hardly a more distorted yardstick. Historians may someday look back upon that period as a short-lived golden age. Energy was remarkably inexpensive for us, the dollar was the world currency, our labor force was disciplined and highly productive, the quality of industrial goods was improving, our national political power was at its peak, technological change was running high, and the economists in Washington were telling us that they were going to fine tune away the cyclical economic problems. Even the weather cooperated–U.S. winters were milder than historically–and helped our always productive agricultural sector become even more productive. In some years of the 1960s the growth rate was doubled the national historical average. What an act to follow.

Let me now describe an economy for you. This is a quote from a paper that I've read recently. "There was an abundance of physical capital but it was underutilized. There was a highly skilled, well trained, and experienced labor force but its skills did not match the needs of the time. Its business and other social institutions were highly developed but they simply did not seem to work well any longer." Sound familiar? It's a description of the Dutch economy of the eighteenth century. It's also a description, of course, of the American South right after the Civil War, Britain after World War II–and some would even say after World War I–and obviously, to a far lesser degree, it describes the midwestern industrial economy as we enter the 1980s. In each case what developed was not necessarily a stagnant or decadent economy, but was surely an obsolete one.

I wish to close on a positive note. I have been studying the midwestern and southern economies for more than a decade now. This investigation reveals, as do the lessons of both economics and history, that humans are supremely adjustable. Economics is not really a dismal science–its whole foundation rests on the belief that substitution is almost always possible and if given the appropriate incentives people will adjust. History indicates the same. Change and transition create not only uncomfortable disruption, they also create opportunities. From what I have learned from the historical analysis of the Midwest, I think that few regions are better equipped–attitudinally and otherwise–to respond to these challenges. This region nurtured what Professor William Parker of Yale has called "the business culture" in the United States; that is, a society that has produced individuals and patterns of response that are uniquely geared toward perceiving economic needs, toward training people in the skills of business, and toward changing from old ways when that seems necessary. This culture has produced one of the unique regions of the world; one that combines agriculture, industry, and services in a way that very few ever have.

Adjustability is obviously called for. The worst way to deal with today's situation, both history and economics suggest, would be to build in greater inflexibility, to try to freeze things as they are, or, even worse, to try to restore some past environment that seems normal just because it used to exist. New England and the South have made recoveries from far greater economic troubles during this century. Given the strength of its business background it seems obvious that the Midwest can do likewise. Should it not, then it too runs the risk of becoming yet another of history's obsolete economies, persisting in old and comfortable ways more suitable to the past than to the future.

III.

HARVEY C. BUNKE

Professor of Business Administration; Editor Business Horizons, Indiana University, School of Business

I'm to play the role of Cassandra. I'm supposed to point out the difficulties that face the Midwest in the coming decade. That's not a task I'm particularly comfortable with; I'd much rather talk about the mini-boom that we're having in Bloomington now. But that's not my assignment. Before I comment on the difficulties, at least let me look at some of the brighter aspects.

I want to consider four myths. In a sense they have already been alluded to, but I might present them in a somewhat different form. *Myth one:* The North is losing people. The reality is, of course, that the population is growing, but it is growing less rapidly in the North than in the South. This slower growth has produced a certain amount of consternation if for no other reason than that it has caused a reduction in the number of representatives in Congress from 213 to 196 for the Midwest and the Northeast. That's important. *Myth two:* The North is losing jobs. Employment in every northern and midwestern state has grown over the last ten to fifteen years. It hasn't grown as fast as in the South or in the West, but growth is nevertheless evident. *Myth three:* Industry has abandoned the North for the South and the West. Such abandonment is not borne out by studies, which instead seem to show that more than 90% of the loss of jobs in the North is due to plants closing down or to contractions such as we are seeing in the automobile industry. According to these studies less than 5% of the jobs in the South comes from industrial migration out of the North. *Myth four:* The North is being stripped of its highly skilled labor force and is being left with a residual of low-income people who are dependent on welfare support. The truth is, the South has historically had a higher incidence of poverty and still does. We would do well to remember the Midwest, with its more than 40,000,000 people and its gross product of more than $500 billion, is the home of the industrial complex that produces 70% of American steel, two-thirds of its autos, 60% of its machine tools, and that it rests on a very solid and properous agriculture base producing everything from corn to peaches. Moreover, we would do well to remember that the names of such cities as Milwaukee, Muncie, Indianapolis, St. Louis and Detroit are cast in nameplates on machinery that appears throughout the world.

But while we should recognize myths for what they are, we should also recognize certain problems, some of which are so acute and of such magnitude that they carry with them social dislocation and widespread personal suffering. In the last decade, for example, steel lost more than 100,000 employees. Last year's car sales for U.S.-made cars dropped to the lowest level in nineteen years, causing carmakers to suffer red ink to the tune of some $4 billion.

When we think of economic hardship we are, of course, inclined to think of Detroit and the auto industry with its quarter of a million unemployed. But beyond Detroit there are many small tragedies being played out in cities and towns engaged in supplying auto parts to the major automakers. If you come with me to any assembly plant you can get a feeling for what's happening throughout the Midwest. In these assembly plants you can see packages, crates, and parts coming from such places as Warner Gear Division, Muncie, Indiana; the Akro Corporation, Canton, Ohio; Yale Rubber Manufacturing Company, Sandusky, Michigan; Rockwell International, Logansport, Indiana; American Hose Corporation, Winchester, Indiana; Huron Plastics, St. Clair, Michigan; Stant, Connersville, Indiana. And these are only a few of the countless number of plants that are involved in supplying the parts that go into making the automobiles that Detroit produces. Half the companies supplying auto parts employ twenty or fewer employees. Because so many of the companies are so small they are overlooked as we focus our attention on the troubled automakers. But to employees the economic distress is no less severe whether they are discharged by a large or a small company. Last year parts suppliers shut down some eighty-five plants. An Arthur Andersen study predicts a loss of some 400,000 additional jobs in the parts business in the years through 1985.

These are only a few illustrations of the problems that face the heartland. Other difficulties facing us stem from the fact that the region is suffering from old age—its presence is everywhere. We see deterioration in our cities. I'm from Wisconsin, and recently I went through a number of industrial cities that I knew well as a child. It was heartrending. Kenosha, Racine, Fond du Lac—they used to be jewels. Our aging factories have old equipment. The papermills in my home area were really leaders in the thirties. Managers of those mills tell me that now they're using machines and equipment that are sixty years old.

Our conservative management and our labor unions at times seem to be acting as if they were in the decade of the 1930s instead of the 1980s. In our mature industries labor and management sometimes seem to get caught up in holy wars. Last year's bitter six-month International Harvester strike is a prime illustration. No need to assign blame. The point is that International Harvester was, as a result of industrial conflict, deeply and profoundly wounded. In fact, there is growing doubt as to whether the organization will be able to survive. We all know its impact on the operations of the Fort Wayne plant and for a time it appeared that the Indianapolis plant would close. There was a time when American industry in general, and our heavy industries in particular, could tolerate these battles. Our position was so strong, our productivity was so high, that despite the damage such holy wars inflicted we were capable of dominating world markets. We all know this is no longer true.

In facing the future, we need to ask the following questions: How much in the future should we look to mature industries? How much, for example, should we depend on steelmaking with its relatively simple technology that is easily copied? Bulgaria, for example, can manufacture steel, but it will be a long time before the developing world will master the 256K semi-conductor memory chip or the genetically altered micro, which one day may be custom designed to eat ore and spit out refined metal.

Can we do anything to further a favorable midwestern climate for entrepreneurial activities? In recent times it has been the new small company that has provided the jobs. In the last decade, for example, companies in *Fortune's* lists of the 1,000 largest firms reported virtually no growth in jobs, while between 1969 and 1976 smaller firms created 7.4 million jobs, nearly four times as many as the government.

What, if anything, can be done in some of the more mature industries to encourage research and development?

What can be done to change the relationship between labor and management from an adversarial to a cooperative one? Currently the relationship between labor and management too often reminds us of political battles for power rather than cooperative efforts designed to increase productivity.

Are state and local policies designed to encourage economic development? Can we do more?

Do we need to modify our tax policy to make Indiana industrially more attractive?

How do we finance our social services when industrial activity is stagnant and the federal government is cutting back our financial aid to social services?

IV.

JOHN M. MUTZ

Lieutenant Governor, State of Indiana; Director, Indiana Department of Commerce

I am really pleased to be able to participate with you and with the School of Business here at IU as we, through a series of events, commemorate a continued development of the campus here. I am also pleased that the Business School decided to call this conference "Hope in the Heartland."

First, I want to review a few basic truths about Indiana's economy. Then I will talk about the growth potential for our state. And finally I will outline a strategy for realizing the potential that I believe we have.

We know that if we are going to look into the future we have to be sure about where we are right now in order to plan. Right now the unemployment rate in Indiana is second only to Michigan. One of the major reasons for this is that we are too dependent on the auto and steel industries and those industries that serve auto and steel manufacturing. It is obvious to me that Indiana's economy is out of balance and that one of our goals should be to strengthen our basic industry while diversifying the economic base of the state.

Some other truths about Indiana are reported in a study of population, income and employment trends that was recently published by the Indiana University School of Business. Based on that study, the review of the past ten years is discouraging. Let's examine some of the trends, particularly as they relate to Indiana's location in the so-called Frostbelt.

The conventional wisdom among government officials, businessmen and economists, is that there is an inexorable migration of businesses moving away from the northeast and north central regions of the country into the Sunbelt states of the South and West. There are many theories as to why this seems to be the case. They boil down to three. The first theory suggests that businessmen operate as profit maximizers in a traditional manner. They choose to move to the Sunbelt because the cost of doing business there is lower. Labor costs, taxes, transportation, and energy costs are usually cited in this kind of an assessment.

The second theme suggests that businessmen operating in a more humanistic fashion are not merely concerned with profit. The cost of doing business is clearly relevant to their decision but they also look at nonfinancial attributes of the location such as quality of life, climate, recreational opportunities, educational opportunities, and the like. In essence they are willing to accept some tradeoffs against profits for the benefits of those lifestyles.

The third and newest theme relates to technology, and is based on a systems approach to business decisionmaking. It suggests that technological innovation is a primary reason for economic growth. New technology outdates existing products and processes and hastens the decline phase of the product life cycle. The companies that make those products may even close, but the companies created by the new technologies open in the South and West where the labor pool is less skilled and requires lower wages. This school of thought observes that technology applied to production has generally resulted in less, not more, demand for skilled labor; therefore, capital is essentially being substituted for the labor of skilled people.

That's an oversimplification of why many feel the Sunbelt has grown at the expense of our area and the Northeast. Some economists are even challenging whether the Sunbelt phenomenon has been overplayed. A professor of economics at Clemson, Richard MacKenzie, wrote an article in a recent issue of the *Wall Street Journal* entitled "Eight Myths of the Frostbelt Sunbelt Fight". Professor MacKenzie doesn't ignore the fact that there are real problems in the Frostbelt but things may not be as chilly as we think. For example, he says that 90% of all businesses that move stay in the same area of the country. His figures indicate about three fourths even stay in the same state. Even the layoff rate in the North over the past twenty years is lower than in the South and West.

There are several reasons why many economists think that growth in the Sunbelt will level off in the next few years. Accelerating transportation costs will make our central region more attractive to business because we are simply better located and closer to more markets. Natural resources, such as land, water and energy are becoming increasingly scarce in the Sunbelt, driving up prices and reducing cost advantages. The same thing, I think, can be said about labor costs. Still another reason deals with the ability of getting quality products to market. Our skilled workers have a tradition of being on the cutting edge of new innovations. Entire industries like steam machinery, electrical equipment, lighting, appliances, cars, radio and television, were incubated in the northeast and northcentral United States. Business will change rapidly in the next several years and we have a work force that is accustomed to keeping up the pace.

The actual impact on Indiana of development in the Sunbelt is difficult to measure exactly, and there is considerable conjecture about the future of the Sunbelt influence on our part of the United States. But the trends of the seventies are in the past. I believe we are somewhat more concerned now with what's going to happen as far as the future is concerned. We have tremendous strengths; our challenge is to marshall our resources so that we can take advantage of those strengths.

Is this something that we can reasonably expect to accomplish? I think it is assuring to know that a respected national economic forecasting firm, Evans Econometrics, has produced a long-range, national economic forecast which showed an economic recovery by the Great Lake states with Indiana leading the way. This forecast suggests that Indiana has the potential to grow as fast as many of the Sunbelt states when measured by such factors as total output, total personal income, total employment, and population. Of course, a forecast like this is merely a mathematical way of expressing informed opinion. There is a long way to go between opinion and fact, no matter how well informed that opinion happens to be. Such a forecast is probably better thought of as an expression of potential, and if we think of it in those terms the forecast does two things. First, it confirms what many of us has felt for a long time: our region has underlying assets and strengths that we can use to our advantage. Second, it places a tremendous burden on the leaders in both the public and private sector to see to it that this potential is realized.

I would like to share with you some of the basic assumptions that are part of the Evans forecast and that are critical to the outcome that it predicts. The results from the model are based in part on the assumption that petroleum costs will continue to increase and to drive up total costs of transportation, which will make this state's central location and proximity to markets increasingly important. The model also assumes that personal savings rates will grow from a current level of 5.5% back to the levels of 7 to 8%, which will help generate capital to finance the growth that is predicted. It assumes that inflation will drop to the range of about 5% and that needed education and training will take place to generate the right mix of job skills needed in the labor market. With this in mind let's take a look at what Evans forecast believes is the potential for economic growth in this state and the region.

Prediction: 1980-1990. Indiana's compound rate of growth and output during the last decade was a respectable if not spectacular 3.3% even in the face of all the problems the region (Illinois, Indiana, Michigan, Ohio, Wisconsin) experienced. During the decade of the eighties, with many of the worst effects of the decline in the auto industry already behind us, the basic strengths of the region and the state will reassert themselves. The Evans Econometrics suggests the rate of growth and output will climb as high as 4.5% per year.

Jobs. Employment can be expected to grow significantly as increases in output demand cause businesses to expand their capacity. The rate of growth of 1.7% in the seventies will jump to a much stronger 3.5% in the eighties. That's the best in the region, but overall there is strength in the Great Lakes states. Indiana will have a million more people working in 1990 than it did in 1980, a total of over 3.7 million people.

Income. With the growth and output in employment we would expect to see significant gains in total personal income. The Evans model suggests that we could see a growth rate in real personal income of 4.6% in the eighties. That would put Indiana in front of all the Great Lake states and ahead of even the Sunbelt states (Arkansas, Louisiana, Oklahoma, Texas).

Population. If all this comes to pass we will see a significant upswing in population growth. As increased job opportunities cause fewer people to move out and some even to immigrate, the Evans forecast suggests an average 1.5% increase each year during the decade. Michael Evans predicts that 6.6 million people will live in Indiana by 1990.

I think most of you would agree that the Evans forecast is optimistic. It is easy to challenge these projections. But they are not a prediction: they are a view of potential. Realizing this potential will take a lot of hard work and cooperation between private business, the public sector, labor, management, and the university community. Traditional roles and concerns must be discarded to make way for innovative approaches to solving the problems of financing growth, training workers, disseminating knowledge of new processes and products, and in general creating an atmosphere in which the economy of the state and the region can flourish.

It is important to recognize that manufacturing will continue to be the engine that powers the economic growth in our region and for the next twenty years. There has been a shift in the structure of the American economy away from manufacturing to commerce, retail, transportation, and service. However, we believe that the vitality of the other sectors will be more dependent on investment in manufacturing than on any other single factor.

In the Indiana Department of Commerce we have identified nine major areas of economic development policy as most essential to the achievement of Indiana's growth. The nine areas are not generalizations in terms of implementation but are specific programmatic approaches to each of the things that are suggested. Some involve private sectors, some involve public sectors, some of them involve universities, some involve a combination of all of these. But the essence is that if you do not plan in the long range for economic development and diversification and change, then it is not likely to happen. Brief descriptions of the nine areas of concern follow.

One: A targeted industries program. We have limited resources. It is crucial that we identify industries outside the state and those already here with the greatest potential for growth. We will seek to induce investment in those targeted industries to stimulate growth of employment and value added. We have already begun to shift our marketing strategy from a shotgun approach to a rifle approach.

Two: A small business development program is aimed at creating those conditions necessary for rapid expansion among manufacturing establishments in Indiana now employing from about 100 to 500 employees. Most new jobs will be created in small and medium sized firms. These businesses have special needs that we must identify and help meet. The Corporation for Innovation Development, small business assistance programs, and so forth are aimed at this particular goal.

Three: We are proposing a major new program for technology, research, development and transfer. High technology is not an industry in and of itself. It must be viewed as a stimulant to greater efficiency in Indiana's manufacturing sector. Our task is to assure access to those new ideas, processes, devices, and component products that are essential to a competitive industrial base in Indiana. A superior higher education climate is important to attract to keep the talented individuals who will provide the creativity and energy for a successful high technology program. This excellent facility we are dedicating is a sample of the kind of commitment to quality that our universities and colleges must make if we are to train the leadership that is required. And I might also mention that, parenthetically, in the middle of this whole issue is how we harness that tremendous resource of private capital that, because of the Reagan incentive program and because of the cutback of government's involvement in research, will be available from the private sector. There must be a way to unify the capital of the private sector with the research potential of the university complex.

Four: A major effort to improve the processing and marketing of Indiana's agricultural commodities, machinery and equipment. This program has already begun. Indiana is eighth in agricultural exports and ninth in production. By increasing the processing and export of our agricultural products we can begin to influence the capital flows into the state necessary to finance business and industrial expansion.

Five: A natural resources development policy is aimed at reducing the import of energy into Indiana. We must begin to stem the flow of capital outside the state to finance our own energy needs. We do that by developing our own coal and oil shale potential. Surprisingly enough there is apparently more energy in the oil shale that is located in Indiana than there is in the coal, and I know the coal has been much ballyhooed by the coal industry itself. We also need to conserve the relative abundance of fresh water that is an increasingly valuable factor of production. (A careful look at water legislation may be required so that we have the ability to move fresh water where it's needed.)

Six: We are promoting a new labor-management dialogue that demonstrates to the investment community that management and organized labor in Indiana have a great deal in common. They are more concerned about their mutual interests in creating new jobs than in dividing up the returns from existing jobs. Governor Orr and I have created a labor-management advisory committee to sharpen Indiana's image as a cooperative, productive state. Good working relationships between management and labor will help increase worker productivity and will enhance the quality of life for people.

Seven: We have already started an industrial training program that continues to improve the quality of secondary and post-secondary vocational education. We can and must do a better job of providing task-specific training to employees. With the cost of capital at record highs it is crucial for expanding businesses to shorten the time frame between hiring an employee and having the employee fully productive. The time it takes for employees to become proficient in their tasks is perhaps the most crucial ingredient in the profitability of an operation.

Eight: We cannot afford to neglect transportation. One of the major assets of Indiana has been the transportation capability that we already enjoy. Manufacturers in general can rapidly move raw materials and component parts to the workplace and rapidly move finished products to the marketplace. Our ports on Lake Michigan and on the Ohio River are commercial avenues to the rest of the world. Further port development, which will require state appropriations, and continued availability of our railroad network are vital to maintaining our competitive advantage in transportation. The rail network is in great jeopardy at the present time, and creative solutions for solving the railroads' problems is one of our toughest jobs.

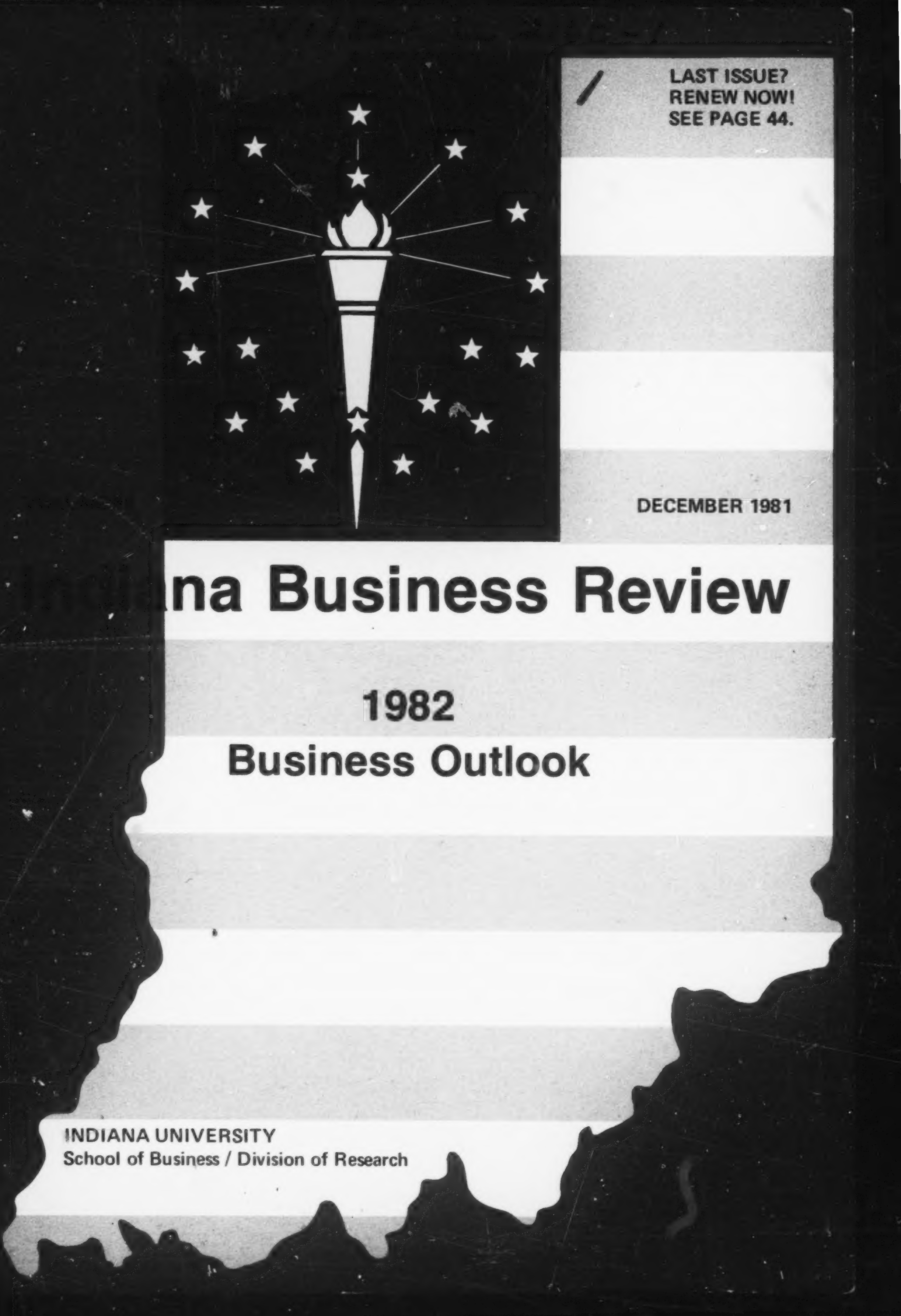
Nine: We will maintain Indiana's favorable attitude toward existing and new businesses and toward the new ideas that fuel progress and jobs. Tax abatements for new equipment and direct incentives to new investment through a variety of state programs, including the Corporation for Innovation Development, were included in the nineteen-bill package with a $15 million annual price in the 1981 session of the General Assembly. Governor Orr and I asked for this program, and we were delighted that the legislature responded in the way that it did by enacting all nineteen bills and providing most of the money that was required to put the program in effect. That is the most comprehensive program for economic development ever passed by one state all at one time. To be sure, a number of states have programs we don't have and some more that we have, but they have gradually added them over a period of years. Revisions and additions to this program were passed in this year's session of the General Assembly and more are contemplated for those sessions that follow.

This is the nine-point strategy that we think is necessary, so that the state has a chance to live up to the Evans Econometric projections. I think it is pretty clear that this list of nine ideas is a bare-bones presentation. The meat that goes on those bones has to come from the cooperative actions of thousands of people in the state of Indiana.

Many of these new programs are already producing inquiries and concreate results. We have reason to believe that corporate decision-makers still have confidence in Indiana: the Claus Company, a major German manufacturer of farm machinery is locating in Columbus; Shoemaker Electric, a Chicago firm, is moving into its third Indiana plant; Kroger is building a major cheese processing plant in Crawfordsville. Reinvestment decisions by major companies are also encouraging us: by Chrysler, by International Harvester, and by the steel industry, which alone has committed $2 billion to the state of Indiana in the next four-year period—about 40% of its total contemplated new investment. Adding to the positive picture are labor-management concessions that have kept plants open and people on the job in cities like Indianapolis and Noblesville and Michigan City and South Bend.

After looking at all these reasons and our strategy for realizing our potential those of us in the Department of Commerce have concluded that, in fact, in the next decade, Indiana can pull even with the Sunbelt. If Indiana matches the potentials in the forecast this state will have more people doing more jobs, producing more and earning more, in the decade ahead. As I said before, to accomplish these goals business and labor must communicate with each other by realizing we want them both to succeed. Universities and vocational schools must educate and train the leaders and producers and keep those people in Indiana for this economic resurgence to take place. Business must continue to be creative and the public leaders must continue to provide a clear agenda for action and be willing to state policy and to take risks. And notice, I said public officials as well as private business is supposed to be willing to take those risks.

What I'm saying to all of you is what I have been saying to people across this country, "Don't paint Indiana with the same brush that many would use to paint other states in the Midwest region of the United States. I believe Indiana is one of the major hopes for the heartland.



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1982 BUSINESS OUTLOOK—A MESSAGE FROM THE DEAN

The business news reaching our homes and offices these days continues to confirm a national recession. For purposes of business planning the major question is, When will the recovery commence? The Outlook offered in this issue of the *Indiana Business Review* suggests that recovery will be in progress during the summer of 1982. The timing of such events is always uncertain, but the necessary forces seem to fall in place with the consumer leading the way as the year progresses.

Once again we are pleased to offer the Business Outlook for the coming year to our friends across the state and the nation. Each year we visit selected major communities in the state to share our views with members of the business community in twelve cities, and we record a televised version of the presentation for statewide distribution. This outreach effort provides us with opportunities to hear from business leaders about local and industry conditions. The Outlook presented in these pages reflects that interaction.

During 1982 the flow of business news should improve. We extend to each of you our best wishes for the coming year.

SF Otteson

Schuyler F. Otteson, Dean
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The National Economy

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INTRODUCTION

As recently as two months ago, the general-consensus forecast of business economists was for reasonably good growth in 1982 and beyond, with real output expected to increase at about 3.4% next year. The second half growth rate of 3.5% was expected to be a slight improvement in the 3.1% growth expected for the first half of 1982.

However, it is increasingly clear that the U.S. economy is in a recession that will continue at least through the first half of 1982.

The current recession began in the second quarter of 1981, when the rate of growth of real output declined by a seasonally adjusted annual rate of –1.6%. The preliminary figures for third quarter 1981 growth came in at –0.6% (later revised to +0.6%). For both of these quarters, the decline was mostly limited to the automobile and housing sectors, both of which were buffeted by tight money. However, the economy began to drop like a stone in the fourth quarter, and preliminary estimates are that growth may be a negative 5% to 9% annual rate for the fourth quarter of 1981.

How can there be a recession if a recession requires two consecutive quarters of negative growth and the third quarter of 1981 was found to be positive? The answer is simple. On November 19, the Commerce Department revised the third quarter growth figures for the U.S. from –0.6% to +0.6%. Although this would appear to be an optimistic revision, possibly indicating that the U.S. is not yet in a recession, it is a pessimistic change. It reflects the fact that there was an additional $3.7 billion in investment than was indicated by the earlier figures. This investment was almost all unintended investment, reflecting an additional $3.7 billion buildup in unwanted inventories in the third quarter. In view of the weak sales so far in the fourth quarter, it will be difficult to run off these unwanted inventories until late 1982.

The 1981-1982 recession will be about five quarters long, running from 1981:2 through 1982:2. The third quarter of next year will be flat, and positive growth will take place in the fourth quarter. The softening in the economy that began in the second quarter of 1981 and will continue through the first half of 1982 will bring about a slight decline in the rate of inflation and in short-term interest rates. As tangible results of the administration's supply-side policies begin to show visible effects on the financial markets, interest rates will soften through the latter part of 1981 and over the first half of 1982.

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* This forecast was prepared by Professor Brady, with comments provided by Professors R. Jeffery Green, David D. Martin and George W. Wilson.

There are ten major reasons why the U.S. economy is now in the middle stages of its eighth post-World War II recession. Together, they paint a rather bleak picture over the next three or four quarters, but will lead to a stronger economy as we enter 1983.

1. The real rate of interest, which was negative (to the extent that the rate of inflation exceeded the 91-day bill rate) for almost the entire interval between 1972 and 1980, turned positive with a vengeance in 1980. After reaching a whopping 5½%, it is currently in the neighborhood of 4%. This has had a disastrous short-term effect on households and businesses alike.

2. Two major sectors of the economy, autos and housing, continue to slump, with no turnabout visible in the near future.

3. Most economists consider that spending by consumers is influenced strongly by their wealth positions. Declining wealth as a result of falling securities and housing markets will impact upon consumption over the coming quarters. Investors have lost over $300 billion in the bond market and about $250 billion in the stock market between April and October of 1981. This is the biggest drop in seven years, and it is comparable to the declines in asset positions that took place in 1969-1970 and in 1974-1975. We all know what happened during those intervals. *Business Week* estimates that $2 *trillion* in paper values has disappeared in the stock, bond, real estate and commodities markets in the first three quarters of 1981. If past consumption patterns hold, we can expect consumption spending to decline in real terms early in 1982. Since consumption amounts to about two-thirds of gross national product, this is an important reason for expecting recession between 1981:2 and 1982:2.

4. Starting October 1 of this year, there were substantial cutbacks in transfer-payment income in the areas of food stamps, student loans, CETA, etc. This will continue to reduce the incomes of some of our lower income groups in the year ahead.

5. Taxes are going up, not down, next year. The Reagan tax cut is simply an approximation of indexing real tax payments to real output, and social security taxes take another substantial increase on January 1, 1982.

6. Farm income will continue to be down sharply during 1982. Net incomes of farmers (in current dollars) fell from $35 billion in 1979 to $20 billion in 1980! Farm income will remain roughly at the 1980 level throughout 1981, which implies a real income drop equal to the rate of inflation. The outlook for 1982 is not much better. The big crops of 1981, coupled with the declines in support prices that are currently being implemented by the Reagan administration, will lead to a weak agricultural sector throughout 1982. Tight money also has a negative impact on farmers.

7. The trade balance, which was positive for the first half of 1981, will turn strongly negative in 1982 and 1983 as a delayed result of the surge of the U.S. dollar relative to other major currencies that took place in 1981. Since real income counts exports as a positive item and imports as a negative item, the deteriorating trade balance will add to the softness in the domestic economy.

8. For those of a monetarist persuasion, the tight money policies of the Federal Reserve between January and September of 1981 spell softness ahead for the economy in 1982. Monetarists generally argue that real economic activity lags the level of monetary stringency by three or four quarters. From the fourth quarter of 1980 through September 1981, M1B (the basic money supply) grew at only a 1.7% rate, considerably below the Federal Reserve target

rate of 3.5% to 6%. Between April 1981 and July 1981, M1B actually declined at a 6% annual rate! This signals weakness in the economy at least through the second quarter of 1982.

9. One usual sign of recession is an inventory buildup, as firms find they are unable to sell all that they have produced. The revised estimates for the second and third quarters of 1981 show that output (GNP) amounted to considerably less than sales. Thus, inventories rose rather sharply in the second and third quarters, resulting in some expected future softness.

10. State and local government spending will decline in real terms in 1982 for the first time in over a decade. The real growth in state and local government spending averaged 2.5% over the last ten years, but is expected to decline by 1% in 1982. Since state and local government spending is 67% larger than federal government spending, amounting to about 12% of total gross national product, it will add further softness to the economy in 1982.

All of these factors noted above indicate that the U.S. economy is about midway through the 1981-1982 recession as 1981 comes to a close.

INTEREST RATES AND CREDIT

Back in 1978, we argued that there would be no recession in 1979 because, among other factors, the real rate of interest was negative, to the extent that the rate of inflation was higher than the long-term money rate of interest. If tax considerations were included, the real rate was even more negative, since interest payments are tax deductible. This negative real rate of return was quite abnormal, since the real rate of interest has averaged a positive 2.5% to 3.5% historically over the last hundred years or so. The shift of the real rate of interest from negative to positive in 1981 is one of our major reasons for an outlook of negative real growth in 1982. The real rate of interest is now much more positive than its historical norm, with short- and long-term money rates of interest in the neighborhood of 13% to 16% in the face of a declining single-digit rate of inflation. The current presence of high nominal interest rates together with moderating inflation has both the administration and business economists puzzled. Various explanations for an unusually high real rate of interest have been given over the last few months. Among them are the following:

1. One of the most widespread explanations is that the markets don't believe that the administration will get the federal budget under control. The official administration budget called for a fiscal year 1982 deficit of $42.5 billion, but many business economists feel that the combination of the administration's tax cuts and higher defense spending will produce much larger (about double) deficits than the official budget assumes.

2. Many economic observers feel that the Federal Reserve won't stick to a tight money policy if it appears that the recession will continue into 1982. Inflation-adjusted gross national product is expected to decline at a seasonally adjusted annual rate of 6% to 9% in the fourth quarter of 1981, and if negative growth continues into 1982, these observers feel that the Fed will fail to exercise continued monetary restraint. Higher anticipated rates of inflation later in 1982 will lead to higher money rates of interest, and the current high real rate of interest is a reflection of continued higher anticipated rates of inflation as the economy recovers in late 1982.

3. The whole concept of "supply-side" economics is coming under fire, with an increasing number of economic practitioners having mixed feelings about the ability of the administration to achieve its economic targets. The expression "voodoo economics" is again creeping up in financial articles and editorials, aided by David Stockman's revelations in the *Atlantic.* To the extent that expectations about the result of current supply-side policies become more negative with regard to their chances of success, these expectations show up in higher nominal interest rates.

4. We will have to finance the higher budget deficits somehow, and many observers feel that any method of financing them is inflationary. If the Treasury sells the bonds financing the deficit to the Federal Reserve, then the deficit is monetized, and is paid for by creating new money, which is highly inflationary. On the other hand, if the Treasury sells the bonds to the private sector, it substitutes public spending for private spending. Since government spending is less likely than private spending to increase the supply of goods and services that the private sector can buy, the net result of the budget is inflationary. Expectations of higher inflation from deficit federal government budgets cause nominal interest rates to rise.

5. Both short-term and long-term interest rates have become more erratic since the Federal Reserve shifted from a policy of interest-rate watching to monetary-growth watching in October 1979. The variation in interest rates since October 1979 is approximately 3½ times as great as it was before that time. The higher risk associated with holding debt capital requires a larger return to induce bondholders to hold their bonds. The huge losses suffered by bondholders in 1981 have forced nominal interest rates upward.

6. Some analysts attribute the divergence of the real rate from its "normal" 3% or so to the devastating effect of income taxes on rates of return. The historical 2.5% to 3.5% real rates of return before 1965 existed when the U.S. economy was subjected to relatively low rates of inflation (less than 5% or so). Since inflation causes tax-bracket creep, a 3% real return before taxes would amount to only 1.5% real return to a household or firm in the 50% marginal tax bracket. Borrowers' insistence on a 3% real rate of return after taxes drives the before-tax real rate well above that figure.

7. Milton Friedman believes that the high real rate of interest is quite unexplainable, and that it represents a temporary "bubble" that will soon dissipate. In his view, it is quite comparable to the –4.5% real rates that occurred in 1973 and again in 1979. In Friedman's view, over the longer run, either nominal rates must fall or the rate of inflation must increase. Nominal rates declined rapidly in the fourth quarter of 1981.

To these explanations let us add still another. The structure of the money and capital markets has been changed profoundly by the Financial Reform Act of 1980, and by financial innovations in those markets. Before January 1, 1981, interest could not be paid on demand deposits, and the demand deposit component of the money supply controlled by the Federal Reserve was the major part of the money supply; changes in interest rates had little effect upon the growth of the money supply. However, since that time, an increasing component of the money supply has been affected by changes in interest rates. For example, at the end of 1980, money market funds in the U.S. amounted to $75.9 billion. So far in 1981, they have more than doubled in size and are now in excess of $180 billion. Over the last few months, these funds have been paying rates of return of about 16% per year. Sixteen percent of $180 billion amounts to a $28.8 billion per year increase in the broadly defined money supply (M2) due to interest accumulations alone. If nobody put a single dollar of new capital into money market funds, they would grow at a rate of 16% per year, far in excess of the rate of growth targeted for M2 by the Federal Reserve System. It is no wonder that the current statistics indicate that M1 (currency and demand deposits) is growing too slow and M2 is growing too fast. M2 includes not only money market funds but overnight repurchase agreements, which are receiving interest returns comparable to those earned on money market funds.

What does the Federal Reserve do when money growth rates exceed their targets? They tighten up on money supply growth, driving up money rates of interest, and allowing the *existing* stock of repos and money market funds to grow at a *higher* rate. These higher growth rates of M2 cause the Fed to become more restrictive, driving up interest rates and allowing the existing stock of M2 to grow even more rapidly. A policy by the Federal Reserve of setting growth targets for M1A, M1B and M2 will continue to increase the disparity between M1A and M2, unless the Fed sets a sufficiently higher target for M2 than for M1A and M1B that the growth of M2 through interest accumulations can be accounted for.

There are a lot of other problems with the divisions of the money supply between M1A, M1B and M2 that are going to make things interesting for the Fed in 1982. It is estimated that about $100 billion will flow into the All Savers certificates between October 1, 1981 and December 31, 1982. If some of this money comes out of demand deposits and other checkable deposits at financial intermediaries, there will be a big shift from M1B to M2, messing up the Fed's [illegible]ts for these two measures of the money supply and throwing the "Fed Watchers" off base.

At the time this outlook is being written,* short-term interest rates are in the process of falling sharply. The average federal funds rate had declined from an average rate of 19.10% for May of this year to 12% as of November 24, 1981. Similar decreases have taken place for 91-day bills and for other short rates, and the prime has declined from 20.5% to 16%. Short-term rates are currently being influenced partly by Federal Reserve actions, but mostly by the softness of the economy. The rate of growth of M1B has been well below the 3.5% to 6% target range, at 1.7% so far this year, so that the Fed must expand the money supply to get within its targets. The continued softening of the economy will also influence the Fed to be more permissive with respect to monetary expansion.

Our expectation is that the yield curve will again become normally (positively) sloped for the rest of 1981 and for the first three quarters of 1982. Long-term rates of interest will continue to come down somewhat. However, two major factors will keep long-term rates from coming down substantially. First, federal government borrowing will be greater in 1982 than in 1981, and a rough guess that the government's funding needs will be about twice the "official" $42.5 billion deficit won't be too far off the mark. This will tend to crowd out private-sector borrowing, and keep long-term interest rates high. In addition, there are substantial corporate debt issues backlogged, waiting for slightly lower rates to come into the market. The amount of short-term commercial debt outstanding is now in the neighborhood of $450 billion, and firms don't like to make long-term capital expansion outlays financed by short-term loans. Both the government and private sectors will keep the supply of long-term debt capital high next year, insuring that long-term interest rates will not fall very much in 1982.

The weakness that we expect in the economy next year will somewhat offset the strong demand for funds. A softening in the real level of economic activity next year will continue to cut private borrowing needs. Of course, the good news is that a decline in real output next year will bring down the rate of inflation somewhat. This should lead to reduced inflationary expectations and have a slight depressing effect on both long-term and short-term interest rates.

In summary, we expect that the yield curve will shift from the "credit-crunch" negative slope that it had for most of 1981 to a more normal positive slope for almost all of 1982. In addition, the yield curve should shift downward about 100 basis points over the first half of 1982 as the economy softens. This means short-term rates in the neighborhood of 10% to 12% and long-term rates running about 13% to 16%.

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*The week of November 22, 1981.

GOVERNMENT

The federal budget of the administration has projected a deficit of $42.5 billion, which most economists agree is far smaller than the deficit they expect. Table 1 shows the official administration budget for fiscal years 1982 through 1985. Where, in the administration estimates, does the underestimation of the deficit come from that conforms to the President's promise to balance the budget by 1984? Most analysts agree that the budget rests on assumptions that underestimate the rate of inflation and overestimate the real rate of growth of the economy over the coming few years.

Table 1
ADMINISTRATION BUDGET
(billions of dollars)

	1982	*1983*	*1984*	*1985*
Receipts	662.3	706.1	760.1	832.5
Spending	704.8	728.7	758.5	834.6
Deficit	–42.5	–22.6	+1.6	–2.1

Table 2
INFLATION, REAL GROWTH, INTEREST RATES
(percent)

	1982	*1983*	*1984*	*1985*
Real Growth	5.2	4.6	4.4	4.2
Inflation (as measured by the CPI)	6.2	5.6	4.8	4.5
Average rate of interest	10.5	7.5	6.8	6.0

Table 2 gives the administration's estimates for inflation, real growth, and interest rates between 1982 and 1985. These are highly optimistic expectations in almost anybody's book. Real growth is quite a bit higher than most economists expect, and inflation is lower than most business economists' projections. The major errors in these budget projections, in our opinion, are related both to government spending and to anticipated tax receipts. It is unlikely that the government will collect $662 billion in taxes next year, since their tax receipt projections are based on a 5.2% positive real rate of growth. Since we project negative real growth for the economy for most of next year, we expect the tax take of the government to be somewhat lower than $662 billion. However, there is a partially offsetting underestimate of tax revenue in the underestimation of the inflation rate, since with the administration's anticipated 6.2% rate of inflation next year there will be less tax-bracket creep than there would be with a more realistic 8% anticipated rate of inflation. If our interest rate projections are correct, and if short-term interest rates remain in the neighborhood of 10% to 12% or so, then the 1% underestimation of short rates by the administration will translate into an underestimation of about $10 billion in interest charges on the national debt. The administration is attempting to curb off-budget borrowing as well as on-budget spending. To the extent that they are successful, we can probably expect the total deficit to be in the neighborhood of $150 billion next year, a little more than triple the official administration forecast for the on-budget deficit.

Most people think of the federal government deficit as the difference between what the government takes in taxes and what it spends as noted in the federal budget. However, the pattern of deficits as given by the budget is far from the complete picture. On-budget borrowing amounts to less than half of the total amount of government spending. The rest of it is off-budget. For example, in fiscal year 1981 on-budget borrowing amounted to a little less than $60 billion, but off-budget borrowing rose about 40% from what it had been the year before, so that the total of off-budget and on-budget borrowing came to $156.9 billion. Nearly $100 billion of the total government deficit was the result of off-budget borrowing!

What makes up this off-budget borrowing? It shows up in three major areas: direct loans, sponsored agency obligations, and guaranteed obligations. Together, these three kinds of off-budget borrowing soaked up about a fifth of all the credit in the U.S. capital market in 1981. Direct loans include those made to such borrowers as Chrysler and the City of New York. Guaranteed and sponsored agency obligations are largely made to the housing sector of the economy and are channeled through FNMA, GNMA, the Federal Home Loan Bank System, and Freddie-Mac (the Federal Home Loan Mortgage Corporation). This "back-door" spending of the federal government may be sneaky, to the extent that it does not receive the degree of attention that on-budget spending does, but it does compete for funds with other spending activities on a dollar-for-dollar basis. The Reagan administration has been attempting to curtail off-budget borrowing as well as the more publicized on-budget cuts. We are well aware of the $1 billion cut in welfare payments, the $1.3 billion cuts in food stamp outlays, and the $6 billion decline in CETA and job training programs. We will be less aware of the future cutbacks in off-budget spending activities.

State and local government spending, which has grown in real terms about 2.5% per year over the past ten years, is going to decline in 1982 for the first time since World War II. Economists have not paid a great deal of attention to state and local government spending, since it has been so stable over the last thirty years or so, but it is about 12.5% of gross national product (as of second quarter 1981), 3.2 times as big as the residential housing market in terms of its contribution to GNP, and far larger than federal government spending. There are quite a few factors contributing to the expected decline in state and local government spending in 1982 and beyond. Among them are the cutbacks in revenue sharing and in transfer payment income, and the chaotic state of the municipal bond markets because of high long-term interest rates. In addition, demographic trends are cutting back the demand for schools, and the softness in the housing market is dampening spending for sewers and other municipal services. We expect that real state and local government spending will decline about 1% in 1982.

REAL OUTPUT

The major current weaknesses in the U.S. economy are surveyed in the introduction. Other than the declining rate of inflation and falling short-term interest rates, there is little evidence of activity adding to new strength in the economy. The recession will not be as severe as the 1974-1975 dip, in good measure because autos and housing are currently so weak they don't have much room to decline further.

Table 3 gives preliminary projections for the recession, by sector, between 1981:2 and 1982:3. To add some good news to the rather bleak numbers presented in the table, recession is one of the best things we can hope for in the interim period while we wait for supply-side policies to take effect in 1983. Without a

Table 3
PRELIMINARY PROJECTIONS FOR THE RECESSION

Component of Gross National Product	*Level of Activity 1981:2 (billions, $ 1972)*	*Proportion of Total GNP (percent)*	*Percent Real Growth*
Consumption	955.6	63.3	– 1.5
Investment			
Nonresidential fixed	159.5	10.6	– 1.5
Residential fixed	48.2	3.2	0.0
Inventory change	9.7	0.6	– 5.0
Net exports of goods and services	46.0	3.0	–53.7
Federal government purchases	109.3	7.2	– 3.0
State & local gov't. purchases	180.8	12.1	– 1.0
Gross National Product	**1,509.1**	**100.0**	– 3.9

softening of the economy we would have run the risk of a head-on collision between the needs of the government to finance its deficit, and the needs of the private sector. With a mild recession we will avoid "crowding out"; short-term interest rates will be able to come down substantially and long-term rates down slightly. This will allow firms to refinance their debts from short- (which is currently a bulging $455 billion) to long-term and to provide a stable financial base for the economic growth we expect in 1983 and beyond.

INFLATION

The most recent figures on the producer price index indicate that we are beginning to win the battle against inflation. Of course, one robin doesn't make a spring, and two or three months of declining inflation rates don't mean that we are out of the woods yet. However, we are optimistic about inflation rates next year. The following points regarding inflation are in order:

1. Generally we have a basic underlying rate of inflation embedded in the economy, which is price level changes excluding food and energy. Tight monetary policies by the Fed are beginning to whittle away at this basic rate. However, things look good on both the food and energy fronts for next year. Since the oil glut appears to be sticking with us for a least the next year or so, there should be little upward pressure on energy prices. Even if natural gas prices are deregulated between now and the end of 1982, there will be only a slight impact on the overall rate of inflation. American farmers are having record crop years. The corn crop is now estimated to be a little over 8 billion bushels, the largest in history and a whopping 22% above the 1980 crop. Together with bumper crops of soybeans and record levels of

cotton, wheat and rice production, we can expect to enter 1982 with the biggest stocks of feed grains in history. These huge harvests should dampen food and fiber costs next year. This may be bad news for farmers, but certainly it is good news for the economy.

2. The outlook for wage demands next year is also quite encouraging. The major part of the wage contracts coming up in 1982 is in industries that are currently in dire economic straits. For example, the automobile, trucking and rubber industries are in no financial position to allow big wage settlements, and the unions in those industries are well aware of it. The unions involved at Pan Am World Airways and at Conrail have deferred pay increases or accepted pay cuts to keep the companies involved in business. As the recession we expect over the 1981-1982 interval continues, labor should become more concerned with preserving jobs than with obtaining big pay increases. If the rate of inflation continues to drop, there should be much less pressure from unions in 1982 wage negotiations than we have had in the past years of double-digit inflation.

3. The basic rate of inflation should diminish throughout 1982 as the recession lessens the upward pressure on prices of all goods and services. The current bulge in the real rate of interest should diminish toward 2% to 3% with a decline in short-term money rates of interest, rather than an increase in the rate of inflation. If the Fed sticks to its policy and turns expectations about future inflation around we should see the short-term money rate of interest, the real rate of interest, and the rate of inflation all declining moderately in 1982.

4. The CPI overstates inflation because of the overemphasis on housing costs, which in turn are influenced strongly by mortgage rates. Just as the CPI overstates inflation in a period when interest rates are rising, it will understate inflation when interest rates are falling. There has been a lot of talk about revising the CPI to eliminate this bias, but our guess would be that the administration would like to see it left in, so that inflation, as measured by the CPI, will decline more rapidly without change.

The good news on the inflation front expressed by the CPI for October 1981, and the expected further declines in inflation for November and December as the result of economic softness, insure that the U.S. will go on record as returning to single-digit inflation in 1981. We expect that the rate of inflation will continue to decline throughout most of 1982, with an average rate of 8% recorded for the entire year. Inflation will continue to abate throughout the first three quarters of the year and will then turn up somewhat toward year-end, as real economic growth begins to pick up in the fourth quarter.

EMPLOYMENT

Even though the economy has been sluggish throughout the early fall of 1981, the unemployment rate had been quite stable, running between 7.3% and 7.6%, between January and September. Many companies, faced with slack demand, had maintained their labor force, waiting for the 1982 upturn. Until August of 1981, the slowdown in the economy was generally limited to autos and housing.

Suddenly in October 1981 there was a new surge of layoffs not related to housing or autos, and the unemployment rate jumped to a rather surprising 8%. Unemployment among blue-collar workers in heavy industry, largely in construction and autos, remained high, but there was also increasing unemployment in real estate, in high technology industries, in the area of forest products, and among white-collar workers. By the end of 1981, unemployment will reach about 8.5%. The overall rate of unemployment usually lags the level of real economic activity by two or three quarters. We expect that there will be a continued increase in the unemployment rate for almost all of 1982. The Chairman of the Council of Economic Advisers, Murray Weidenbaum, announced in mid-November that the jobless rate could rise to 9% before the recession is over. This would make the current recession roughly comparable to that of 1974-1975, making the two recessions equal as the worst since the 1930s with regard to employment.

The incidence of unemployment is always uneven, to the extent that it impacts more heavily upon the young, the unskilled, the uneducated and the nonwhite workers. In addition some sectors of the economy are affected more than others and different geographical regions of the country are hurt much more than others. The Midwest never recovered from the 1980 recession, but Texas still remains relatively untouched by the current slowdown.

Table 4 shows some major unemployment rates for October 1981, as calculated by the Bureau of Labor Statistics.

Table 4
OCTOBER UNEMPLOYMENT RATES
(percent)

Total unemployment	8.0
Construction	17.7
Manufacturing	8.8
Trade	7.3
Transportation and public utilities	4.9

Layoffs are starting to appear in many different sectors of the economy. There is increasing softness in the electronics and aircraft industries, and major appliance firms are feeling the effects of the slumping housing market. Firms in all of these industries have announced plans to slow production and lay off workers. For example, Pratt and Whitney, GE, Caterpillar, RCA, and National Semiconductor are all laying off workers.

The bad news is that these layoffs are coming at a time when transfer payment income sources are drying up, and some of the unemployed will be suffering greater hardships than they would have if they were unemployed a few years ago. The good news is that this will put downward pressures on wage demands next year and moderate settlements will be made in union-management negotiations next year.

Contracts covering more than 3.7 million workers will be negotiated in 1982, and with the current softness in the economy it will be extremely tough sledding at the bargaining table for some of the major unions. New contracts will be made in autos, construction, trucking, rubber, farm implements and clothing during 1982, and one thing all of these sectors have in common at the present time is their precarious economic situation. We expect that unions will be forced to settle for wage increases that will be 2% to 4% less than the pattern of wage increases agreed upon in 1980 and 1981. Unions will be more likely to stress job security than wage demands, and it is possible that the old contracts, such as for a 30% wage increase spread over three years, will not be showing up in 1982.

HOUSING

We believe that 1982 is going to be more or less a repeat of 1981 in residential housing, with starts in the neighborhood of 1.1 to 1.3 million. The reasons for an expected poor performance from the housing sector next year are the same as they were for 1981—tight money and high interest rates.

What was thought to have been one of the most favorable developments for the U.S. housing industry for 1982 was the initiation of All Savers certificates as of October 1, 1981. These certificates pay 70% of the rate on one-year Treasury bills, and their holders can deduct as much as $1,000 of the interest income from their federal tax returns ($2,000 for married couples filing jointly). All Savers certificates were approved by Congress to offset the drain in funds suffered by the thrift institutions as a result of "unregulated" money market funds, and to help alleviate the severe cash drains that many of the savings and loan associations have been experiencing this year.

While these certificates may help bail out the ailing thrift industry, they will not provide much stimulus to housing. This seems odd, since Congress has imposed requirements on the issuers of these certificates that the proceeds be channeled into housing, forcing as much as 75% of all proceeds of All Savers certificates to be placed in home financing or in farm loans. However, there is no requirement that they be placed in mortgages financing the sale of *new* homes. As a result, many S&Ls will take the proceeds of the certificates and reinvest the funds in other already-issued mortgages and securities at a higher rate of interest. In addition, the Federal National Mortgage Association (Fannie Mae) has issued special one-year securities that the thrifts can purchase with the funds generated by selling the certificates. The thrifts will satisfy the home financing requirements of Congress, and Fannie Mae can use the funds to finance its portfolio of *existing* mortgages. At the present time, the FNMA is sitting on $52 billion of old mortgages, some of them yielding returns of less than 9%. You can be sure the FNMA would love to improve its income statements, since it is currently paying over 15% on its short-term borrowings. Fannie Mae can offer the thrift institutions a 12% to 13% return on the special one-year Fannie Mae securities, which will be moneymaking for both the thrifts and the association, since the All Savers certificates carry a current (November 25, 1981) interest rate of 10.77%. The only loser in this certificate program is Uncle Sam.

In the weeks preceding October 1, there was much ballyhoo that these certificates would shift substantial funds out of money market mutual funds and provide a shot in the arm to the construction and real estate markets. Neither of these things came to pass. The net asset positions of money market funds continued to increase. It is not yet clear where the money came from that went into the All Savers certificates, but it is clear that most of it was old, not new money. There are no hard numbers available yet, but it appears that 15% to 25% of the funds to buy the certificates came from outside the thrift institutions, and the remainder came from existing passbook accounts, and from transfers of CDs and other existing accounts within the institutions.

Why didn't the All Savers certificates help out housing? To answer, you need only ask the question, "If you were a savings and loan manager, would you take money you borrowed for fifteen months (October 1, 1980 through December 31, 1981) and lend it out on long-term mortgages?" This is precisely the reason that 70% of the savings and loan associations in the U.S. are in the red this year. Why ask for more trouble? The certificates ended up as a partial bailing out of the thrift institutions, and as a means of helping Fannie Mae unload some of its portfolio of low-interest mortgages, but with little tangible effect on the housing and construction markets.

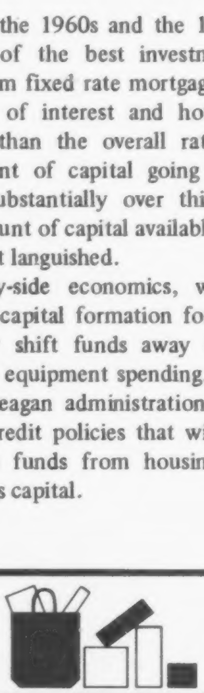
Nineteen eighty-two will be a transition year for housing, but the outlook for 1983 is much brighter. Housing cannot make a substantial comeback until mortgage rates retreat from their current 16+% to 12% to 13%. Chances improve for this to happen in 1983 as a result of economic events forecast for 1982.

The continued underlying demographic factors signal a strong demand for housing through the rest of the 1980s. But the long-term outlook for residential housing may not be as bright as it has been over the last thirty years or so. Housing has been heavily subsidized by the government over the last three decades with the Federal Home Loan Bank system to lend money to savings and loan associations; with the FHA and the VA to subsidize, guarantee and insure home mortgages; with FSLIC to insure savings deposits at thrift institutions; with Regulation Q to keep savings deposit rates down; and with the federal tax laws allowing deductions for interest and taxes on owned homes and capital gains deferments and deductions on the sale of residential housing.

The inflation of the 1960s and the 1970s made housing one of the best investments around, with long-term fixed rate mortgages at relatively low rates of interest and housing prices rising faster than the overall rate of inflation. The amount of capital going into housing increased substantially over this inverval, while the amount of capital available for productive investment languished.

The new supply-side economics, which focuses on long run capital formation for the industrial base, may shift funds away from housing to plant and equipment spending. Our guess is that the Reagan administration will attempt to initiate credit policies that will, in the long run, move funds from housing to investment in business capital.

CONSUMER SPENDING



Consumption spending has been the major factor in providing what small growth the economy has experienced so far in 1981. The recent declines in the stock and bond markets have been in the neighborhood of $400 billion, eroding about 5% of the net worth positions of households. High interest rates have curtailed spending on housing and autos, and a slumping housing market has eroded the sales for major household durables such as dishwashers and refrigerators. The increasing rate of unemployment and the continued softness in the economy will lead to a decline in real consumer spending next year of about 1% to 2%.

For a while in August and September, it looked as though consumption spending was rebounding, mainly because of a spurt of automobile buying stimulated by widespread declines in auto prices. As was the case in the 1974 downturn, the domestic automobile producers may have spoiled the 1982 market by excessive sales in late 1981.

Some forecasters are expecting an increase in consumption spending as a result of the 5% cut in income taxes that began on October 1 of this year. Such an increase is unlikely. The Reagan tax cuts are only an approximation of indexing taxes for inflation to eliminate tax bracket creep, and real tax rates will continue to rise in 1982. Consider, for example, a household consisting of four people with one wage earner making $30,000 a year. The fourth quarter 1981 tax cut will reduce the wage earner's taxes by only $58 for that quarter while bracket creep over the same interval will increase the same person's tax liabilities by $75. Add to this the sharp increase in the level of income subject to Social Security taxes that will take place on January 1 of 1982. The increase will mean that a large number of wage earners will have Social Security payments taken out of their paychecks for the entire year of 1982. For 1981, most wage earners had paid their entire contribution by the end of the third quarter. Since most households that earn less than $18,000 a year pay more in Social Security taxes than they do in individual income taxes, there will be a one quarter increase in real disposable income in the fourth quarter of 1981 that will come to a sudden halt on January 1, 1982.

Consumption spending depends on total wealth, not just personal income, according to the permanent-income hypothesis. For most of us, our major source of wealth is our own human wealth. However, the value of nonhuman wealth has been shown to affect the level of consumption spending. The decline in the stock and bond markets so far in 1981 has eroded a great deal of the value of securities. On January 1, 1981, there was about $1,369 billion of assets trading on the New York, American and over-the-counter exchanges. By October 7, the market value of these equities had declined to $1,266 billion, a paper loss of more than $100 billion. Losses in the bond markets have been even more staggering. Between June and September of 1981, paper losses in fixed-income investments were in excess of $300 billion. There are no precise estimates with regard to losses in the commodities futures markets but they are probably larger than the losses on the stock and bond markets combined. Add to this the decline in the rate of inflation on residential housing (and their nonliquidity) and you have a lot of evidence to indicate households are a lot poorer now than they were at the beginning of 1981. This decreased wealth should lead to contracting consumption expenditures in the year ahead.

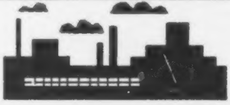
The other side of the consumer spending coin is consumer saving, and one of the major focal points of the new economic plan is to stimulate an increase in household savings. The tax cuts themselves will not have much effect on the level of household savings, first because they really aren't tax cuts, and second, because time-series consumption functions indicate that saving is a rather constant proportion of income over time. What will increase savings more than anything else is a return to positive real rates of interest, so that real savings are not eroded by inflation. The elimination of Regulation Q, the new regulations regarding IRAs and Keogh plans, and the changes in the U.S. financial structure are more likely to affect savings rates than anything else.

These changes will begin to show up on January 4, 1982, as people begin to take advantage of new laws regarding the treatment of funds put away for retirement. As a great number of households decide to put $2,000 per working member into an IRA account and deduct it from their taxable incomes, the savings rate may jump rather sharply in 1982. A variation of the basic economic law that says "There is no such thing as a free lunch" is the law that says "You can't save your money and spend it at the same time." If there is a sharp increase in the funds placed in savings, there has to be a decrease in the amount of funds spent. Not many households are going to put $2,000 or $4,000 into an IRA account, or put $10,000 or more in an All Savers certificate, and at the same time buy a new car or put a down payment on a house.

Those who are expecting the 1982 tax cuts to generate a Kennedy-type economic recovery led by consumption spending are missing the major focus of the current administration. That focus is on generating savings for a more rapid long-term growth rate. When you compare U.S. savings rates to those in West Germany or Japan, they are very low. To increase the overall savings rate in the U.S. we must set economic policies that will encourage savings by firms and by the government. We need to eliminate the double taxation of corporate profits and get the deficit of the federal government down. Our current tax system places the same tax on savings that it does on consumption, since it is a tax on income. In the long run it would be beneficial for the savings rate if we could tax consumption and eliminate the tax on savings, as is the case in those countries that use the value-added tax to generate tax revenue.

In summary, because of diminished real wealth, higher unemployment, flat real personal income, higher savings rates and increased taxes, consumption spending will decline about 1.5% in real terms during 1982.

BUSINESS FIXED INVESTMENT

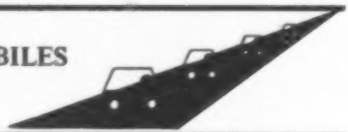


By all indications, business fixed investment will fare about the same as consumption spending during 1982, down about 1.5% in real terms. Declining orders for a wide range of industrial products took place in August and September of this year. Only defense-related industries and nonelectrical machinery industries have shown any sign of strength in recent months, and the outlook for plant and equipment spending has been described by a Department of Commerce economist as "pretty bleak."

Manufacturers are currently operating at about 79% of capacity, and, with no increase expected in real consumption spending, there appears to be little incentive for firms to add to capacity in the coming year. It is another case of a typical economic downturn. Consumption spending falls off, new orders fall, industrial production is cut back, unemployment rises, consumption demand continues to fall, industrial production declines further, etc. This is going to be the kind of activity we are likely to see between now and the fourth quarter of 1982.

The available fourth quarter data for 1981 provide substantial evidence that business fixed investment is deteriorating rather sharply. While the second and third quarter declines were limited to housing and autos, industries with major links to those sectors are now feeling the pinch. Firms producing steel, glass, trucks, farm machinery, furniture, and appliances, as well as housing brokerage services, are all cutting back their activities rather sharply. We expect further declines in capacity utilization rates and in final sales over the first half of 1982. This softness itself will operate to dampen business fixed investment for most of the year. Because of the long-term nature of capital investment projects, real capital spending usually picks up more slowly than other sectors of the economy. We expect that the recovery in business fixed investment will begin very late in 1982 and pick up steam in 1983.

AUTOMOBILES



For the first nine months of 1981 domestic auto producers assembled 4.953 million units, about 6% above the 4.677 million units produced over the same interval in 1980. There was a surge of auto sales in August and September of this year as a result of price discounts, interest rate subsidies and heavy promotional programs. The big three auto producers may have seen a replay of the 1973-1974 automobile inventory buildup that was an important cause of the 1974-1975 recession, and they have currently cut production back sharply in the fourth quarter of 1981. Sales of cars in the fourth quarter will be the lowest in twenty-three years.

One of the reasons for the softness in the automobile market is the relatively high price of the new domestic models. The average sticker price of a 1982 domestic automobile new exceeds $10,000. Consumer reluctance is reflected in sharply higher prices for used cars, as prospective purchasers who either can't or won't pay the five-figure price of a new car are opting for used models instead. Interestingly, the biggest jump in automobile prices isn't for the car, but for the "destination charge," which has jumped from about $200 in 1981 to almost $500 for the 1982 models. These charges used to be incidental (less than $100) back in 1978, when they were a minor item that was lumped in with taxes and license plate charges. The destination charge is higher to get a U.S. car twenty miles from the plant ($399) than to get a Toyota five thousand miles from Japan ($161).

The Ford Motor Company has temporarily closed two assembly plants, one in Michigan and one in California, and Chrysler is permanently closing its Scio Township plant in Michigan. American Motors has also temporarily closed its assembly plant for utility vehicles in Toledo, Ohio. General Motors has four assembly plants temporarily closed to gear up for the production of the new 1982 models.

Surprisingly, in the face of a strong U.S. dollar this year, import sales are off about 9% from a year earlier. As of September 1981, import sales were running at about 2.1 million units, the lowest in two years. Domestic sales were running at a seasonally adjusted 6.7 million units in September, down from the 8.1 million level of a month earlier.

Automobile sales will remain soft over most of next year. Our estimates for domestic and foreign auto sales (at seasonally adjusted annual rates) are given in Table 5.

Table 5
AUTOMOBILE SALES

	Domestic Sales (millions)	*Foreign Sales (millions)*
1981:4	5.9	1.9
1982:1	7.0	1.8
1982:2	7.3	1.8
1982:3	7.8	1.8
1982:4	8.0	1.9

NET EXPORTS

The appreciation of the U.S. dollar in terms of the major foreign currencies that took place between January and September of 1981 has begun to deteriorate our merchandise trade balance still further. The surge in imports, as we have found foreign goods considerably less expensive in terms of dollars, is beginning to erode our foreign trade position. Assisting in its deterioration is a decline in U.S. exports, since the surge of the dollar on foreign exchange markets has made our exports less competitive on world markets.

Time series data on exchange rates and merchandise trade balances indicate that flows of imports and exports lag exchange rate fluctuations by as much as a year or more, since international contracts take long intervals to reflect current exchange conditions. Therefore, we can expect a deterioration in our merchandise trade balance throughout 1982 and beyond. Our merchandise trade balance was in deficit by $25.3 billion in 1980, and is anticipated to be in the neighborhood of a negative $29 billion for calendar year 1981. The 1981 surge in the dollar will cause the merchandise trade balance to continue to deteriorate next year. C. Fred Bergsten, senior fellow at the Carnegie Endowment, feels that the dollar is inflated by a considerable margin, and that its true worth, in terms of purchasing power in world markets, is 20% to 25% below current levels. Based on these estimates, we anticipate that the merchandise trade balance will deteriorate to a deficit of $36 billion in 1982 and to a minus $45 billion in 1983.

One reason the current net export picture looks better than it really should is because imports of crude may be substantially greater than the data suggest. An oil glut has forced some of the big petroleum firms to temporarily store oil in big tankers at sea, rather than having it delivered to overcrowded storage facilities on shore. Since imports aren't registered as such until they actually reach U.S. shores, there may be a lot of future imports sitting just offshore waiting to be recorded.

The OPEC is beginning once more to look like a cartel rather than a price leader-price follower institution. All the OPEC members except one have finally agreed on a $34 per barrel price. The Saudis raised their prices from

$32 per barrel, and many of the other OPEC members lowered theirs to the newly agreed-upon market price.

One positive thing that can be said for the increased volume of merchandise imports we will have in the coming two years is that reduced-value imports will assist in relieving domestic inflationary pressures.

SUMMARY

In summary, our outlook is bearish for 1982 but is bullish for 1983 and beyond. The major difference between our forecast and many of the other economic outlooks that you will see publicized at the beginning of 1982 is in the timing of the new Reagan program. We do not feel that the U.S. economy can shift rapidly from the Carter stop-and-go policies to the supply-side policies of the Reagan administration. It's going to take a year to shift gears. We just don't see how you can have all of those ten sets of factors noted in the introduction operating on the U.S. economy next year and expect anything but a sustained decline in economic activity for the early part of the year.

We remain very optimistic about the period for 1983 and beyond. The Reagan policies stress the long run, which essentially involves a restructuring of the economy to achieve sustained real growth of output and a permanent decline in the rate of inflation. Part of this policy is a shift of activity from the public sector to the private sector, and in 1982 we will see declining activity at the government level. It will be in 1983 that the private sector will enter a period of sustained growth, since Congress has designed the supply-side tax cuts in such a way that their major impact will not be felt until 1983. They did this by attempting to hold the federal budget deficit down for fiscal 1982. If, as we believe, 1982 proves to be a transition year, 1983 could be the year that we get a sustained real economic expansion somewhat similar to the one that started in 1960.

The Indiana Economy

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December 2, 1981

The somber forecast for the nation in the preceding pages produces a similar forecast for Indiana. The following is a summary of the forecast made with the Econometric Model of Indiana (EMI) in mid-November 1981:

1. Employment in Indiana will decline in the first two quarters of 1982 from the levels achieved a year earlier; employment will start to grow and in the last half of 1982 will exceed employment levels of late 1981.
2. Real personal income is expected to rise slightly (about 3%) in 1982: this growth will be concentrated in the latter part of the year.
3. Real wages and salaries, which dropped sharply in 1981:3, will decline again in 1981:4. Growth in real wages and salaries will be positive in 1982:1. The annual rate of growth will increase to almost 6% in the last quarter of 1982.

Summary of National Forecast

The forecast for Indiana was based on the forecasts for the U.S. economy presented on the preceding pages of this issue of *IBR*. The recession is expected to end in the first half of 1982, with real growth closing out 1982 with a 5% growth rate. The inflation rate (CPI) will decline until mid-1982 to around 6%, then it will rise to about 7.5% in 1982:4. Long-term interest rates will decline but not a great deal. The national unemployment rate will peak in 1982:2 at 8.6% and then begin a gradual decline.

Employment

Figure 1 shows total employment in Indiana from 1978:1 to 1982:4. These data are not seasonally adjusted; therefore, year-to-year rather than quarter-to-quarter comparisons should be made. The year-to-year comparisons show that employment in each quarter of 1979 was higher than employment in the same quarter in the following years. In 1981:3 there were 163,000 fewer people employed in Indiana than were employed in 1979:3. Our forecast is that employment will begin to grow in late 1982. The 1982:3 employment figure will be 7,000 higher than 1981:3, but still will be approximately 156,000 less than the figure for 1979:3.

Table 1 shows the values forecast for certain aggregate variables. We are forecasting that the seasonally adjusted unemployment rate will reach 11.5% in 1982:2. That rate is more than two percentage points higher than the unemployment rate in 1981:3. The unemployment rate is forecasted to decline after 1982:2, to 10.63% in 1982:3 and to 9.67% in 1982:4.

Table 1
EMI SUMMARY VARIABLES

Variable	*1981:2*	*1981:3*	*1981:4*	*1982:1*	*1982:2*	*1982:3*	*1982:4*
Personal income*	53,603.00	54,935.00	56,157.34	57,456.90	58,848.78	60,663.88	62,441.60
percent change (AR)	5.40	10.32	9.20	9.58	10.05	12.92	12.25
Real personal income*	27,991.12	28,071.03	28,120.85	28,206.63	28,347.20	28,709.83	29,015.61
percent change (AR)	−1.05	1.15	.71	1.23	2.01	5.22	4.33
Wages & salary disbursements*	33,533.00	33,467.00	34,038.81	34,919.33	35,818.04	36,861.06	38,069.52
percent change (AR)	2.45	−.79	7.01	10.76	10.70	12.17	13.77
Real wage & salary disbursements*	17,510.71	17,101.18	17,044.97	17,142.52	17,253.41	17,444.94	17,690.28
percent change (AR)	−3.82	−9.03	−1.31	2.31	2.61	4.51	5.75
Nonmanufacturing employment #	1,464.30	1,454.47	1,447.51	1,412.49	1,452.96	1,464.42	1,474.07
Manufacturing employment #	666.67	664.03	650.50	640.71	651.25	661.26	666.88
Establishment employment #	2,130.97	2,118.50	2,098.00	2,053.20	2,104.21	2,125.68	2,140.94
Total number employed #	2,353.93	2,342.60	2,308.56	2,255.17	2,325.08	2,349.59	2,353.57
Percent unemployment (NSA)	8.84	9.05	9.74	11.31	11.32	10.63	9.67
Percent unemployment (SA)	8.98	9.15	10.47	10.28	11.51	10.75	10.40

1981:3 Values are Preliminary
AR = Annual Rate
* = Millions of Dollars SAAR
#= Thousands of Persons, not Seasonally Adjusted
NSA = Not Seasonally Adjusted
SA = Seasonally Adjusted

Figure 1
TOTAL EMPLOYMENT: 1978:1–1982:4
(not seasonally adjusted)

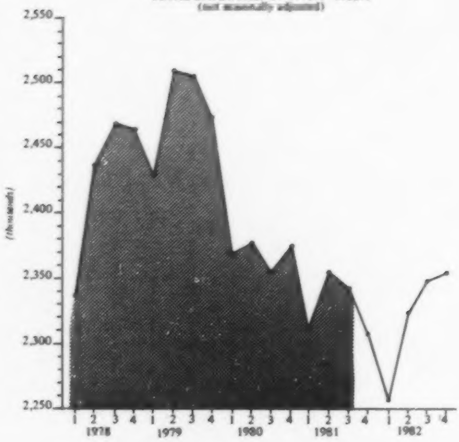


Table 1 also shows that improvement begins in nonmanufacturing employment in the third quarter of 1982. From 1981:2 to 1982:2 nonmanufacturing employment declines by 11,340 people, but from 1981:3 to 1982:3 there is an expected increase in nonmanufacturing employment of almost 10,000 people. Manufacturing employment begins to improve in the fourth quarter of 1982. There is a decline of 15,420 in manufacturing employment from 1981:2 to 1982:2 and a decline of 2,770 from 1981:3 to 1982:3. From 1981:4 to 1982:4, however, there is an increase of 16,380.

Personal Income

Figure 2 shows that the historical peak in real personal income was in 1979:1; after that it began a steady decline to its low in 1980:2. We are forecasting that real personal income will reach its 1979:1 level in 1982:4. Even though real wages and salaries, which make up around 60% of real personal income, declined by slightly more than 9% in 1981:3, real personal income grew by 1.15% from the previous quarter (Table 1). This increase from 1981:2 to 1981:3 was primarily the result of increases in dividends, interest and rent and in transfer payments. The increase in dividends, interest and rent was due to higher interest rates. The jump in transfer payments was the result of indexing. Together these two components of personal income account for 88% of the increase in real personal income from 1981:2 to 1981:3.

Real personal income is expected to grow at a slow rate in 1981:4 and in 1982:1, then it will pick up slightly, growing by just 2% in 1982:2. Real personal income will then grow at healthy rates of 5.2% in 1982:3 and 4.3% in 1982:4.

Wages and Salaries

Wages and salaries constitutes the major portion of personal income. Figure 3 shows that real wages and salaries reached its peak in 1979:1, then declined through the 1980:2 recession to 1980:3. There was some improvement in 1980:4 and 1981:1, but then real wages and salaries began to fall again as we entered our current recession. We expect slow growth in the first and second quarters of 1982 followed by high growth rates of 4.5% in the third quarter and 5.8% in the fourth quarter of 1982. In 1982:4 the real wages and salaries variable will be 7% less than it was in 1979:1.

Figure 2
REAL PERSONAL INCOME

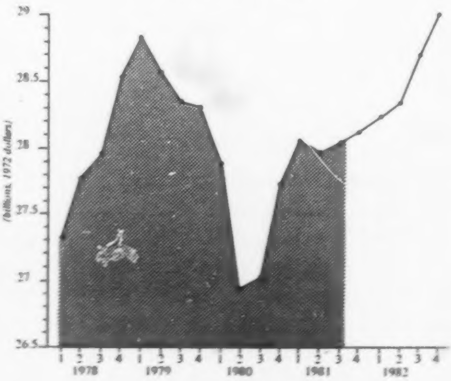
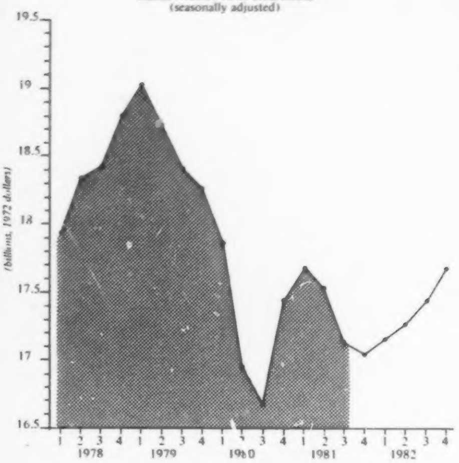


Figure 3
REAL WAGES AND SALARIES
(seasonally adjusted)



The decrease in real wages and salaries appears to have two sources, the more obvious of which is the decrease in the number employed. The expected number employed in 1982:4 is 3% less than in 1979:1. The less obvious source for the decline in real wages and salaries is that there is a decline in employment in some high paying sectors (e.g. autos and parts) while employment in some low paying sectors is increasing (e.g. services).

Conclusion

Although the forecast is relatively optimistic for the latter part of 1982, the levels of employment and real wages and salaries at the end of 1982 are expected to remain below their levels three to four years earlier.

INDIANAPOLIS

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November 16, 1981

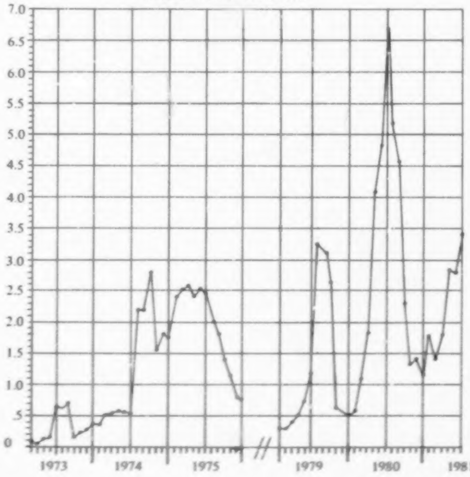
A forecast for the first half of 1982 requires three perspectives: the position of the metropolitan economy in the business cycle, an assessment of the structural changes occuring in the economy, and some speculation about the impact of the 1981 Economic Recovery Tax Act on the economy.

The Business Cycle

The duration and severity of the 1980-81 recession in the manufacturing sector is illustrated by the labor turnover rate shown in Figure 1. Actually, significant periods of layoffs have occurred in each of the past three years. These layoffs reflect unanticipated inventory accumulation. The turnover rate has reached higher levels during the current recession than during the 1973-75 recession. As inventories are depleted, both layoff and turnover rates should decrease by the spring quarter.

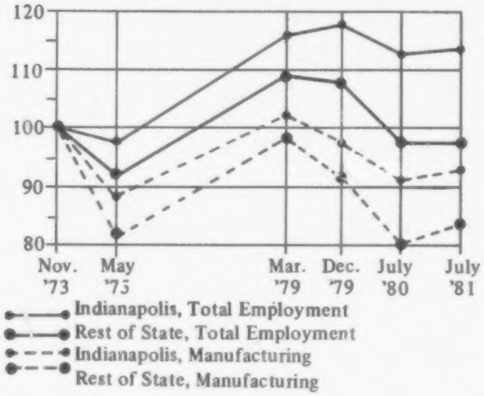
Since the automobile industry is a major contributor to the cyclical fluctuation, what cyclical factors might stimulate economic recovery? Two such factors are the decline in

Figure 1
METROPOLITAN INDIANAPOLIS
LABOR TURNOVER RATE*



$$\frac{\text{*Layoff rate in manufacturing}}{\text{Quit rate in manufacturing}}$$

Figure 2
EMPLOYMENT CHANGE
(November 1973 = 100)



interest rates and the aging of the automobile stock–25% of the total auto population is estimated to be 4-6 years old. On the precautionary side, however, the younger population is confronted with rising costs for housing and for utilities. These expenses reduce the discretionary income available for the purchase of new cars. From a supply-side perspective Chevrolet of Indianapolis is helping meet the challenge of foreign imports by providing the sheet metal panels for the new small S-10 pickup truck.

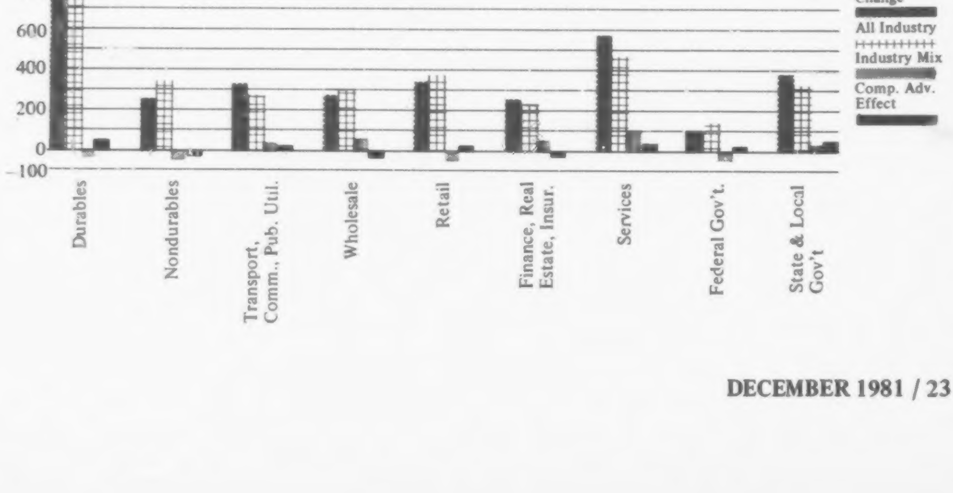
In an attempt to reduce production costs, the auto industry has substituted capital equipment for labor, causing a reduction in the labor requirement per unit of output and inducing a structural change at the same time the cyclical change is occurring.

Structural Change

The role of structural change is difficult to measure and analyze, because its magnitude depends on the standard by which you compare. Since the Indianapolis metropolitan area generates one-third of the state's total employment, it is important to compare the economic performance of Indianapolis with the rest of the state rather than with the entire state. This comparison, shown in Figure 2, leads to two important observations: (1) there has been a significant difference between Indianapolis's performance and that of the rest of the state; and (2) in the past year, both Indianapolis and the rest of the state have had limited recoveries.

Why the difference between Indianapolis and the rest of the state? The industrial structure of the Indianapolis and rest-of-state economies differs because the Indianapolis economy has a greater proportion of its economic activity in stable industries. A more

Figure 3
ANALYSIS OF INCOME CHANGE BY INDUSTRY,
INDIANAPOLIS METROPOLITAN AREA, 1974-1979
(figures in millions)



industry-disaggregated analysis of the Indianapolis economy using the state economy as a standard is provided by Figure 3. The first bar shows the actual change in the amount of labor and proprietors' income (in current dollars) generated by place of work by industry over the 1974-79 period in the Indianapolis metropolitan area. The second bar shows how much the change in income would have been if the industry had grown at the same rate as the state economy. The third bar shows how much of the actual change in Indianapolis may be attributed to whether the industry statewide changed faster or slower than the all-industry statewide rate–the industry mix effect. The fourth bar shows how much of the actual change may be attributed to whether the industry in Indianapolis increased its share of the statewide industry–the comparative advantage effect.

The following observations are made.

1. The durable goods industry was the largest contributor to *income growth* followed by services and state and local government (some of the state and local government increase was financed by federal dollars).

2. The industries that increased at rates *greater than the all-industry statewide rate* were transportation, communication, and public utilities; wholesale trade; finance, real estate, and insurance; services; and state and local government.

3. The industries that *increased their shares of the respective statewide industry* (showed a comparative advantage) were durables; transportation, communication, and public utilities; retail trade; services; federal government; and state and local government.

What are the implications for 1982? Although there will be much discussion about diversifying the economy from cyclical durables, it will be necessary to determine which durable goods industries have the comparative advantage and what the basis for the advantage is.

The role of the Indianapolis economy in the state economy is to serve as a transportation and communication center as well as a provider of a variety of personal, business, health and legal services and employment in hotels and motels and computer and data processing. The National Sports Festival in July, the White River Park and Convention Center expansion when completed, and the shift to an increasingly information-based economy will stimulate these kinds of activities.

Given the central location of Indianapolis, it is surprising that wholesale trade did not show a comparative advantage. The ongoing expansion of Park 100 should help in this area.

In previous recessions, government employment has been countercyclical–increasing during recessions to reduce the severity of the contraction. Indianapolis is the location of many state and federal government agencies. However, since May 1980, government employment in Indianapolis has been decreasing. This change–occurring during a *cyclical* contraction–reflects a *structural* change in the role of the federal government and a demographic shift in the age distribution of the population. Because of the current tight fiscal positions of the state and local governments, the government sector is not likely to play a countercyclical role. Therefore, the unemployment rate may rise to a higher level than in previous recessions before expansionary forces in the spring begin to reduce the rate.

Tax Act of 1981

A purpose of the tax act is to stimulate investment in plant and equipment. A critical question is, *Where* will the stimulus occur? An analysis of determinants of manufacturing investment among the fifty states has found that although low state and local taxes per capita are associated with higher levels of investment, other factors are more important. One of these factors is the labor cost variable. A state that has high labor productivity and a low percentage of the labor force in unions is associated with high levels of investment. Another factor is the amount of capital stock per capita. Where high amounts of capital stock per capita already exist, a state is associated with high levels of investment. Although Indiana is a high capital-stock-per-capita state, and, therefore, should get a relatively high proportion of the new investment when it occurs, the state's labor cost variable may play a negative role.

The investment tax credit and accelerated cost recovery system may speed the process of shutting down older plants. Such plants are more likely to be located in the older industrial areas of the Northeast and Midwest. Therefore, it is important to monitor the expansion needs of our plants to insure that new investment occurs at existing facilities.

Indianapolis has several firms with significant research and development capability to develop new products, including Eli Lilly ($60 million research center to be started in spring), RCA, HURCO, Anacomp, Cybotech-Ransburg, Boehringer-Mannheim, Texscan, Bell Laboratories, Detroit Diesel Allison, Naval Avionics, and Indianapolis Center for Advanced Research. The city's educational institutions and a developing venture capital commitment add to the resources that are available to promote industrial evolution.

Our financial services industry–banks, thrifts, and insurance companies–will also be challenged to develop new products in an increasingly competitive environment.

Finally, although the federal tax code continues to treat homeownership in a very favorable way that has promoted suburbanization, the 1981 tax reform appears to provide a slight incentive for downtown rehabilitation through more generous tax credits for older buildings. Also, HUD has shifted the appropriation for its Section 8 rent assistance program to favor the central city by allocating relatively more funds for existing units and less for new units–thus contributing to a central city bias.

RICHMOND

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Assistant Professor of
Business & Economics
Indiana University East

November 11, 1981

Again this October I took a survey of the business community in Wayne County. I sent questionnaires to 350 businesspersons who own or manage firms that are listed in the 1981 Membership Directory of the Richmond Area Chamber of Commerce. By type of economic activity the 82 reporting firms are: 22 industrial, 14 commercial, 3 financial, 2 agricultural, 2 recreational, and 39 other. Altogether these firms employ 10,345 persons or about one-third of the active labor force in the county.

Of the responding firms, those that are in the manufacturing sector represent transportation equipment, electrical machinery, nonelectrial machinery, and wood and concrete products. Those firms in the nonmanufacturing sector represent finance, wholesale and retail trade, building trades, communications, and miscellaneous services. None of the firms from these two sectors is immune to the prevailing conditions of high interest rates, high prices for energy, and weak demand for products. Consequently, the local economy's sensitivity to the national economy translates into layoffs. Of the reporting firms, 30% have laid off employees and only 7% have plans to rehire for the rest of the year. Currently, the local unemployment rate is 9.8% and is expected to increase with the onset of a recession. If the recession is severe, then the local unemployment rate could climb to 14%, thereby repeating the June 1980 record rate.

Despite this dismal news, there is a glimmer of hope. About 40% of the reporting firms plan to expand business activity in 1982. Such increased activity, along with the removal of nonattainment status in regard to environmental quality, is likely to brighten the employment picture. Further, an overwhelming majority of the businesspersons, particluarly those involved in retail trade, expect that President Reagan's economic program will favorably affect their enterprises. They somewhat temper their optimism concerning business conditions in 1982, partly because of the prevailing skepticism in Wall Street.

The money and credit markets, both national and local, are fully aware of the President's determination to balance the budget in order to bring down inflation. In view of past history, the markets want to see actual reductions in federal expenditures and not just promises. The Federal Reserve's adherence to monetary aggregates instead of financial market conditions breeds an instability. This keeps interest rates high, as financial market participants demand higher rates of return because of the uncertainties associated with monetary policy. For every interest rate point increase the federal government boosts its spending by $2½ billion, thereby widening the deficit and creating, among other things, the right condition for continuing high interest rates and less economic growth.

The reporting firms stress that in order to stimulate economic growth in the county we need balanced industrial diversification, expansion from within the existing industrial base, improvement in the labor climate, advanced educational opportunities for our young people, and city beautification with concomitant infrastructure. A designation of attainment status could eventually be a fillip toward meeting some of these needs.

Overall, in view of the economic downturn, I expect sluggish growth in the local economy for at least two quarters in 1982. Since manufacturing employment accounts for about 53% of all area incomes, it is imperative to arrest the slowdown in this sector so as to avoid its potential adverse trickle-down effects in other sectors of the local economy. Lower inflation and interest rates, along with the tax cuts, may make it possible to boost the manufacturing sector.

EVANSVILLE

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Professor of Economics
University of Evansville

November 13, 1981

After a strong first quarter, the Evansville economy slipped into a recession, as did the economy in other parts of the nation, in the second quarter. The decline in the second quarter was slightly more severe than that experienced in the 1980 recession. The regional economy showed some recovery in the third quarter, but it moved downward again in the fourth quarter. The current recession is expected to continue at a mild rate through the second quarter of 1982. Thus the regional economy will not be able to recover to its 1979 activity level as projected in this report one year ago.

Because of the new recession, the overall performance of the Evansville economy in 1981 was no improvement over that of 1980. In terms of the Evansville Area Business Index, the composite index was 105.20 in 1980, and it is estimated to be 105.42 in 1981 (see Table 1). Various sectors of the local economy, however, varied in their direction and degrees of performance. Industrial production was up 1.7%, business construction was up 1.2% and the area employment gained 0.4%. Trade and services was down 0.8% and transportation was down by 1.9%. The finance sector suffered a 5.3%

EVANSVILLE AREA BUSINESS INDEX (1977 = 100, Revised)

	Industrial Production	Trades & Services	Construction	Transportation	Finance	Employment	Composite Index
Monthly (1981)							
January	116.77	103.41	116.67	105.29	100.75	106.84	109.56
February	113.19	104.88	110.55	99.54	99.16	105.36	107.72
March	113.69	102.88	115.06	102.25	100.39	105.76	107.87
April	99.92	100.68	107.06	99.19	98.21	104.95	101.32
May	102.84	99.39	107.95	98.34	96.25	104.61	101.78
June	103.52	101.76	110.64	99.10	97.34	105.50	103.28
July	115.25	101.93	110.57	98.68	96.88	105.59	107.28
August	104.29	102.97	107.73	100.94	98.54	106.37	103.95
September	111.60	104.14	99.71	96.77	96.68	105.91	105.75
Annual							
1978	102.45	106.47	123.28	104.51	108.95	106.92	106.66
1979	106.30	107.28	114.41	104.85	109.05	108.59	107.66
1980	106.38	103.90	109.41	101.57	103.38	105.08	105.20
1981*	108.25	103.10	110.82	99.68	97.94	105.49	105.42
1982†	109.00	105.50	113.00	100.00	101.00	104.00	106.67

*Estimated
†Projected

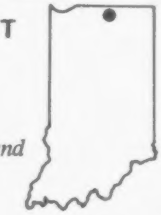
loss after a loss of 5.2% in 1980. The culprit of the current recession is the high interest rate, which has caused a reduction in consumer spending and in business investment. Because of low demand, area unemployment began to creep upward in the second quarter to a level above the national rate. The September rate was a record high of 8.9% and the unemployment rate may remain at that level through the end of 1981.

The recovery phase of this recession should start in the third quarter of 1982 as a new tax cut of 10% takes effect. With an expected growth of 2% in the second half, the 1982 economy is projected to gain about 1% over 1981.

In 1982, industrial production will be at about the same level as, or slightly higher than, in 1981. As business inventories run low and consumers regain their extra spending power, the production of durable goods should pick up. The trade and services sector has a good chance of improvement through the year at a rate of over 2% as a result of two new shopping centers expected to be open in 1982. New car sales may improve, especially with a lower interest rate. Residential construction cannot get worse, and it should improve if the mortgage rate declines by two percentage points. Business construction will remain strong throughout 1982, at a level slightly below 1981. Transportation activities should follow a trend similar to the performance of industrial production. The financial sector should improve in 1982 as the long-term interest rate declines, even though there may still be some fluctuations in the short-term rate. The employment situation will get worse in 1982 compared to the 1981 average. The area unemployment rate may remain at 8 to 8.5% in the first half of 1982 and then slide below the 8% level in the second half.

In short, the Evansville economy in 1982 will see a year of ending recession and of a mild recovery. The growth rate will be 1.2% in terms of the Evansville Area Business Index. Economic and financial environments should become more certain and clear as the new federal economic policies take a firm hold.

SOUTH BEND–ELKHART



JOHN PECK
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Indiana University at South Bend

November 17, 1981

The report from the South Bend and Elkhart communities has changed little from recent "Outlook Reports". We lack output data for the area, but employment statistics and other indicators of local activity suggest that the economies of these two communities have yet to recover from the broad effects of a downturn in transportation equipment and other durable goods and product markets that impacted the area in mid-1979.

Tables 1 and 2 give various indicators of local economic activity for the South Bend and Elkhart communities. The figures contained in the tables are seasonally adjusted and, with the exception of the unemployment rates, are index numbers expressed as a percentage of 1967 base year values. In each table, comparative index numbers are averaged for the year 1980 and 1981 through August. Index numbers are also given for an August 1980 to August 1981 comparison.

South Bend Nearly every indicator compared in the 1980 to 1981 year-to-year averages shows modest but continued decline—and 1980, when compared with 1979, was itself a year of declining economic activity in the area.

The picture is somewhat the same when comparing August 1981 with August 1980; however, when analyzing the detail behind that summarized in Table 1, it appears that there has been some recent strengthening in the cycle-leading manufacturing sector of the economy. In addition a recent declining trend in the overall work-force population has leveled off as we approach year's end.

Elkhart Although conditions in the Elkhart economy have been similarly depressed, one of its principal industries—the recreational vehicle industry—experienced a significant recovery from 1979 and 1980 lows. Shipments industry-wide will likely register a growth of some 40% for 1981 over 1980, and leading firms in the area are once again posting profits.

As in the neighboring South Bend community—and, of course, much of the nation—the housing sector labors under high mortgage rates and is very depressed. New housing permits issued remain at historic lows. Only offsetting activity in commercial construction has helped to keep the overall building sector alive.

Outlook The prospect for a mild recession in the national outlook should have only minimal effects in South Bend and Elkhart for firms capable of weathering another six months of an already prolonged local downturn. Recent signs of strength—at least relative to conditions over the preceding 30 months—in manufacturing employment, industrial energy sales, defense contracts and RVs—are pluses. Moderating interest rates and mid-1982 rebound nationally will be warmly welcomed in South Bend and Elkhart.

Table 1

SELECTED INDICATORS FOR SOUTH BEND
(Seasonally adjusted: 1967 = 100)

Indicator	*Average 1980*	*Average Jan.-Aug. 1981*	*Aug. 1980*	*Aug. 1981*	*Percent Change Aug. 1980-Aug. 1981*
Industrial Electricity Sales[1]	121.3	128.0	108.6	113.1	4.1
Natural Gas Sales[2]					
Commercial	134.5	131.9	110.9	134.4	21.2
Industrial	84.8	89.3	78.4	79.3	1.1
Employment Data[3]					
Nonagricultural Employment	115.8	112.8	114.0	111.1	– 2.5
Manufacturing Employment	85.3	83.4	83.6	84.1	.6
Nonmanufacturing Employment	134.6	130.4	133.3	128.0	– 4.0
Help Wanted Index[1]	72.9	69.5	64.4	71.5	11.0
Unemployment Rate[3] (% of work force)	9.6	8.6	10.0	8.1	–
New Passenger Car Sales[3]	91.8	77.7	94.3	77.7	–17.6
New Truck Sales[3]	131.3	105.5	138.1	123.6	–10.5
Construction Data[4]					
Estimated Value of New Housing Permits	216.4	152.3	277.6	90.7	–67.3
Number of New Housing Permits Issued	67.7	51.5	92.9	26.9	–71.10
Average Value Per New Housing Permit	322.9	349.0	321.1	362.4	12.9

[1] South Bend.
[2] St. Joseph County.
[3] South Bend SMSA.
[4] St. Joseph County excluding the cities of South Bend and Mishawaka.

SOURCE: Bureau of Business and Economic Research, Indiana University at South Bend.

Table 2

SELECTED INDICATORS FOR ELKHART
(Seasonally adjusted: 1967 = 100)

Indicator	*Average 1980*	*Average Jan.-Aug. 1981*	*Aug. 1980*	*Aug. 1981*	*Percent Change Aug. 1980-Aug. 1981*
Industrial Electricity Sales[1]	161.7	173.0	156.1	169.9	8.8
Natural Gas Sales[1]					
Commercial	156.5	153.1	110.1	137.5	24.9
Industrial	248.4	270.2	229.7	259.8	13.1
Employment Data[2]					
Nonagricultural Employment	129.8	129.7	126.3	130.0	2.9
Manufacturing Employment	111.3	111.6	107.1	113.3	5.8
Nonmanufacturing Employment	252.9	250.7	249.1	248.8	– .1
Unemployment Rate[2] (% of work force)	11.2	8.8	12.6	7.8	–
Construction Data[3]*					
Estimated Value of New Housing Permits	137.5	120.4	121.5	91.7	–24.5
Number of New Housing Permits Issued	59.1	46.6	56.9	33.9	–40.4
Average Value Per New Housing Permit	225.2	255.2	197.6	278.8	41.1

[1] City of Elkhart.
[2] Elkhart SMSA.
[3] Elkhart County excluding cities of Elkhart and Goshen.
*All construction data has base year 1970 = 100.

SOURCE: Bureau of Business and Economic Research, Indiana University at South Bend.

TERRE HAUTE

MARVIN FISCHBAUM
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November 20, 1981

The Terre Haute region has experienced two successive years of deteriorating economic conditions, and faces the prospect of further erosion. The dimensions of the decline are not at all clear, as available evidence is somewhat contradictory. Prospects through March of 1982 appear poor, while the magnitude and timing of any subsequent recovery remains uncertain.

The establishment employment estimates of the Indiana Employment Security Division provide the most comprehensive indicators of local economic activity. From September 1980 to September 1981 total establishment employment for the region is estimated to have declined by 3,700 jobs, or by over 5%, the most rapid deterioration for that time period of any metropolitan area in the state. A year ago, the loss from September 1979 to September 1980 appeared to be 3,800 jobs. Subsequent revisions reduced that loss, which now appears to have been 2,200 jobs. Thus, the cumulative attrition of the past two years comes to 5,900 jobs, or over 8½%.

Construction may well be the weakest sector in the local economy. Over the past twelve months contract construction employment fell by 800 jobs, or by 19%. For the same interval the value of permits for residential construction fell off by 20%, and the value of permits for nonresidential construction declined 60%. Lenders express extreme reluctance to initiate new construction loans, and they also perceive an absence of demand. The current industry employment level of 3,400 jobs substantially exceeds the 2,000-job annual average that prevailed through much of the 1970s. Construction activity will continue to fall in 1982 as projects initiated in 1979 and earlier come to completion.

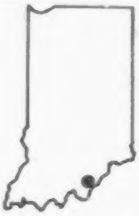
The resale of residential property has become an increasingly difficult, and intricate, endeavor. Mortgages, when available at all, are subject to annual interest rate adjustments. But, in comparison to 1979, the number of mortgages extended to facilitate ownership transfers dropped by over 50%. With increasing recourse to contract sales and the like, total real estate transfers have fallen rather less drastically. Still, the difficulty of selling a house is illustrated by what must be at least a fivefold increase in newspaper listings of unfurnished houses for rent. Rising interest rates were the cause of the chaotic real estate situation, but declining rates will not eliminate the mess. Financial institutions, having been burned by losses on their mortgage portfolios, will not quickly return to aggressive lending policies.

The level of manufacturing activity has been stable in recent months. On a September-to-September basis, employment slipped by 900, but most of that occurred early in the year, with the closing of Stran Steel, and with a layoff at CBS. Manufacturing employment, while stable, is off 2,800 from the peak reached in 1978, and seventeen firms experienced layoffs at one time or another during the past year. Further, in December, the Visqueen Division of Ethyl Corporation will close its local production facilities, and J.I. Case will shut down operations for a month, laying off 600.

Retailers in Terre Haute serve a large market area that extends well beyond the SMSA, and well into rich agricultural areas in central Illinois. Conditions in agriculture impact strongly on retail sales. Local farm income is bad for the second straight year. Spring rains, and an early frost contributed to uneven yields, while bumper yields elsewhere, high interest rates, and worldwide recession, contribute to low commodity prices. Perhaps in response to higher energy prices, perhaps in response to market saturation elsewhere, modern shopping centers are going up in smaller outlying communities, reducing the appeal of a trip to the city. Given other area problems–unemployment in construction and manufacturing, declining real income of government employees, declining transfer payments–retailers should be hurting. Perhaps they are. From September 1980 to September 1981 employment in retail trade dropped by 1,100, the greatest absolute decline of any sector, and that occurred in spite of the addition of 200,000 square feet selling space in Honey Creek Square. The announced closing of the Montgomery Ward Store on December 24 will reduce employment by an additional 160. Still, merchants report that 1981 sales were not that bad, at least not until conditions turned sour in October. Vigo county car dealers increased their share of Indiana sales, and general merchandise sales apparently kept up with inflation.

1981 was not a good year for Terre Haute, and as the nation is slipping into recession local conditions are not improving. One can harbor hope for the spring.

JEFFERSONVILLE NEW ALBANY (Louisville Area)



FAY E. GRECKEL
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November 23, 1981

The Louisville-area economy remained very sluggish during the first nine months of 1981, although conditions were not as bad as in northern Indiana. Preliminary data for October, however, point to a significant downturn in employment and output for the final quarter of the year.

Economic activity in the Louisville area had declined during the first three quarters of 1980, turning upward rather definitely during the last quarter of that year (see Table 1). The recovery appears to have faltered after that, with temporary gains in some sectors during early 1981 more or less offset by later declines, particularly in the third quarter.

Here, as elsewhere in the nation, the weakest sectors are housing and motor vehicles, together with businesses that depend upon these industries. The sharp decline of these two sectors provides a graphic illustration of the disadvantage of our relying on a restrictive monetary policy alone to reduce inflation: the burden of the resulting economic slowdown falls disproportionately upon the most interest-sensitive industries.

The Louisville area has had losses at both the manufacturing and the retailing stages of the automotive industry. In addition to the previous shutdown of local LTD production, Ford's truck plant has gone through a series of layoffs and recalls, with layoffs generally predominating. Employment should pick up after the first of the year, when production of Ranger trucks begins at the former LTD plant.

During the first nine months of 1981, car sales improved by about 1% over their lackluster 1980 level on the Louisville side of the Ohio River, but they declined by about 1% in the Indiana portion of the metropolitan area. Overall, the gain in number of cars sold was 0.8%, with sales of domestic cars gaining ground at the expense of imports. Truck sales declined about 3% overall, with Floyd and Clark Counties in Indiana again faring worse. Reflecting the poor market, two car dealerships closed in the Indiana counties. Three dealerships have closed in Jefferson County, Kentucky, but about four times as many dealerships remain there as in the less populous Indiana counties.

Table 1

ECONOMIC INDEXES, LOUISVILLE METROPOLITAN AREA, 1979-1981

(Quarterly Averages, seasonally adjusted, 1967 = 100)

	Industrial Production Index	*Trade & Services Index*	*Construction Index*	*Financial Index*
1979:				
Q1	125.5	151.4	152.4	346.6
Q2	122.6	149.8	143.5	365.3
Q3	118.4	148.8	150.5	375.6
Q4	116.1	150.2	156.0	373.2
1980:				
Q1	114.6	148.3	129.3	408.1
Q2	102.5	136.8	103.4	382.8
Q3	102.0	137.5	123.6	378.7
Q4	109.1	141.6	134.9	391.1
1981:				
Q1	107.3	148.8	130.2	388.3
Q2	111.6	141.7	131.2	381.1
Q3	106.1	141.6	123.3	393.7

SOURCE: Research Department, Louisville Area Chamber of Commerce

Housing starts, and home sales in general, remained very depressed in 1981. Construction employment was buoyed somewhat by large public and private building projects in the downtown area, as well as by a number of commercial and office projects throughout the metropolitan area. Restoration and remodeling of existing buildings, including private homes, also helped partially fill the home construction void.

The number of new building permits issued during the first nine months of 1981 reveal the extent of the new housing decline. In Jefferson County, which includes the city of Louisville, the 519 permits issued this year for single family dwellings were only 55% of the number issued during the same months of 1980–which was itself a slow year. When multifamily units are included, the total residential units (1,413) authorized for the first three quarters of 1981 amounted to 80% of the units authorized during the corresponding 1980 period. Single family building declined less in Clark and Floyd Counties. The 310 permits issued through September 1981 represented 80% of the corresponding 1980 level. Total dwelling units authorized in the two Indiana Counties during the first three quarters of 1981 equaled 75% of the 1980 permit level. When current residential building is compared with the more vigorous activity of the late 1970s, the gap becomes much more pronounced. The total number of residential units for which building permits were issued in the first nine months of 1980 represented 40% to 65% of the corresponding number issued in the 1976 to 1978 period, with the exact percentage depending upon the county and the year chosen for comparison.

The national slowdown in homebuilding and housing sales affected related industries in this metropolitan area. Southern Indiana's most vulnerable major industry is the manufacture of veneers and wood products. Although many firms managed to hold their own rather successfully through the summer, by September or October most were reporting significant declines in orders and impending layoffs. On the Kentucky side of the Ohio River, General Electric, the region's largest employer has seen a drastic decline in appliance orders. While its work force appears to have been cut back less than proportionally, there have been a number of temporary layoffs, as well as some permanent ones, throughout 1981, culminating in a six-week temporary furlough for most employees at the end of the year.

Other capital goods industries are also particularly susceptible to high interest rates and economic slowdowns. International Harvester was among those seriously affected here. Jeffboat, in Clark County, which until recently had enjoyed very strong demand for its barges, caught up with its back orders this fall and will lay off 600 workers, including the entire third shift, by the end of the year.

Instead of growing by 10,000 to 14,000 jobs, as usually happens in years of economic growth, the five-county metropolitan area had the same number of employed workers (389,200) in the third quarter of 1981 as it had

Table 2

LOUISVILLE AREA EMPLOYMENT AND UNEMPLOYMENT, 1979-1981*

(Quarterly Averages)

	Louisville Metropolitan Area+		Clark and Floyd Counties	
	Nonfarm Employment	*Unemployment rate (%)*	*Nonfarm Employment*	*Unemployment rate (%)*
1979:				
Q1	395,000	5.0	45,000	6.2
Q2	407,200	5.1	47,100	6.0
Q3	405,900	5.7	47,100	6.4
Q4	402,900	5.1	47,900	5.9
1980:				
Q1	389,300	6.6	46,600	7.4
Q2	391,900	9.0	47,700	9.1
Q3	389,200	8.9	47,200	8.7
Q4	390,900	7.6	48,100	8.0
1981:				
Q1	384,500	8.0	47,400	8.3
Q2	389,900	8.2	48,500	10.1
Q3	389,200	7.8	48,800	9.1

*The employment data refer to establishments located within the area cited and include workers on strike; the unemployment data refer to residents of the area cited, and are seasonally adjusted.

+Includes Floyd and Clark counties in Indiana, and Jefferson, Oldham, and Bullit counties in Kentucky.

SOURCES: Indiana Employment Security Division; Kentucky Department for Human Resources had a year earlier, with the average number of employees for the full nine-month period actually declining slightly in 1981 (see Table 2). Most job losses were in manufacturing, construction, and transportation (especially rail and motor freight); gains occurred in government and service sector employment.

As was true in 1980, total employment expanded in firms located in Floyd and Clark Counties, with an average of 1,000 more jobs held in the first three quarters of 1981 than in the same months of 1980. This is roughly half the normal job expansion for the two Indiana counties. Employment in these counties is less dependent on the housing- and auto-related industries and therefore suffered less from the declines affecting those sectors. By year-end, however, the layoffs at Jeffboat, as well as at the Census Bureau, will offset job gains in other industries, and all metropolitan area counties are likely to show net job losses.

Unemployment rates are higher locally than nationally, but not as high as in several northern Indiana cities. The metropolitan area unemployment rate (seasonally adjusted) averaged 8.0% for the first nine months of 1981, compared with 8.5% for the same period in 1980. The higher unemployment rate for residents of Clark and Floyd Counties (a 9.2% average for 1981) probably reflects the fact that about one-third of the workers who live in those counties commute to jobs in Kentucky, and a disproportionate share of these commuters are likely to have held jobs in the large manufacturing firms that laid off the most workers.

Preliminary data for October indicate a further slowdown in the local economy, with employment falling and unemployment rising as 1981 ends. As the recession deepens both nationally and locally, more sectors of the metropolitan-area economy will be affected. An upturn is not likely until late spring or early summer. Naturally, the faster interest rates decline and the more convincingly inflation moderates, the sooner will the recovery begin and the stronger it should prove. Consumer spending will be stimulated midyear by the scheduled tax cuts, which will enhance the recovery. While housing starts should improve by midyear, employment will lag. Overall, therefore, the 1982 Louisville area economy is likely to produce an average activity level very similar to that of 1981.

KOKOMO–MARION

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November 25, 1981

Overall, the performance of North Central Indiana's (NCI) economy during the first ten months of 1981 could be described as neither very strong nor very weak. Unemployment rates dropped significantly from their highs in 1980; yet they remained high above the national average, and, in many areas, above the state average. While the news about the expansion plans of existing industries and the arrival of new industries was greeted with enthusiasm, some old or financially troubled industries quietly folded their businesses. In some industries the existing production schedules were expanded, thus paving opportunities for new jobs; in other industries, however, jobs were lost because of production cutbacks. The performance of the housing sector remained dismal due to extremely high interest rates. In particular, the construction of new homes slowed noticeably.

City and county governments were forced to trim their budgets because of dwindling tax revenues and cutbacks in state and federal aid.

Many public schools registered declining enrollments because of migration of people from the area.

Along with the factory workers, farmers had to face economic hardships. NCI farmers suffered $108.7 million crop damage, or 9% of total crop damage in the state, due to heavy spring rains and flooding.

Finally, NCI was omitted from the Enterprise Zone Commission set up by Governor Orr. Given the economic conditions in NCI and the policymakers' tilt towards the idea of enterprise zones, it would have been appropriate to have an NCI representative on the commission.

Now, of course, with the news about the back-to-back recessions, the economy will be jolted again. NCI's economy is quite sensitive to the trends in the national economy because of its close ties with the manufacturing sector, especially auto, steel, transportation, and heavy industries. This sector shifts its gears rapidly in the event of impending recession or recovery.

Already, the signs of recession are showing up in NCI's economy. The unemployment rates have started to rise after reaching lows in June and July. Factory production has slowed down as implied by the lower rate of increase in the industrial electricity use. Sales of existing homes have declined. Similarly, new residential home construction activity has almost halted.

THE 1982 FORECAST

What's in store for NCI's economy? As I dust off my crystal ball and gaze through it, I see depressing economic statistics for the fourth quarter of 1981 and the first two quarters of 1982. The recession at the national level will likely remain longer and deeper than the Reagan administration would like to concede. It will prompt more layoffs and hardships throughout NCI.

In NCI's economy, the recession will extend through the first quarter of 1982. The economy will sputter and spurt through the second quarter. It will gain momentum in the third and fourth quarters of next year. NCI's economy, trapped in a roller coaster-style industrial activity, will turn upward earlier than at the national level. In general terms, the economic forecast for NCI's economy is as follows:

Employment

Unemployment rates will remain high in the final quarter of 1981 and the first quarter of 1982. They will remain stable or begin declining in the latter part of the second quarter, and continue to do so in the third and fourth quarters. Layoffs will occur, mostly in the manufacturing sector. Some city and county government employees will likely lose jobs because of the budgetary crunch.

Increased layoffs in factories will be accompanied by shorter workweeks and reduced overtime during the next three to five months. In the event of economic upturn, the employers will first increase the overtime and then gradually recall laid-off workers or hire new ones.

Hourly Wages

Employers will increase pressure on the labor unions to accept wage concessions. Workers will likely accept a freeze or lower wage increases in order to preserve their jobs. Overall, workers will not make many gains on the wage front.

The Housing Sector

Homebuyers will not get much relief in the mortgage interest rates in the coming six months. The mortgage rates will likely drop to 15% or somewhat lower levels before starting to rise along with the expected economic recovery. A strong recovery in the housing sector will not occur until the mortgage rates fall to 13% to 14% levels. The chances of achieving such low levels are dim.

Retail Sales

Because of a recessionary psychology or the erosion of confidence in Reaganomics, consumers will spend their money cautiously in the coming six months. Cash registers will not ring loudly during this year's Christmas season.

Retail sales will remain less vigorous in the next six to eight months than before. This will mean lower sales of big-ticket items. Businessmen will also maintain lean inventories because of high interest costs and lower expected sales.

In the latter part of the second quarter or the early part of the third quarter, the consumption spending will increase because of high expected incomes. Consumers will have or will expect to have more spendable income because of job recalls or overtime. They will also get a 10% cut in personal taxes, beginning July 1982. Many people will also have additional income coming from interest earnings on saver's certificates, mutual funds, and government securities. All in all, retail sales will remain strong in the latter half of next year. Higher consumer spending will stimulate the economy.

City and County Governments

Reduced business and industrial activity will lower tax collections for city and county coffers. In addition, tax breaks given to many industries and further cutbacks in the state and federal aid will reduce the size of city and county revenue pies. This will force city and county governments to trim expenditures, lay off employees, or increase taxes. Balancing city and county budgets in the NCI will be as difficult a task as walking barefoot on a tightrope!

Public schools will experience further declines in enrollments because of migration of families to the sunbelt area or to regions with economic growth prospects. Teachers will likely get smaller salary raises than before and some teaching jobs will be consolidated or abolished.

Farm Income

Various government reports suggest that farm income will either remain unchanged or will decline slightly because of lower prices. Prices will remain low because of bumper crops and reduced foreign demand.

Inflation

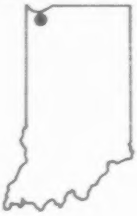
Inflation, as measured by the CPI, will remain in single digits, yet very close to a double-digit number during the next six to eight months. However, with the upturn in the economy, prices will increase in the third and fourth quarters of 1982. Grocery prices will remain fairly low and steady.

SUMMARY

North Central Indiana's economy will remain weak during the next six to eight months. Hard times lie ahead for many people. Reduced unemployment and supplemental benefits, and cutbacks in welfare payments, food stamps, and other forms of assistance will make life difficult for many unemployed people.

Unemployment rates will remain in the double digits and the labor force will experience further shrinkage. Factory workers will not make many gains on the wage front. The chances of the housing sector recovering strongly are dim. Retail sales will not remain vigorous in the next six to eight months; they will, however, zoom up in the latter half of 1982. City and county governments will be faced with significant reductions in their revenue pie. Farmers will not make many gains in their income. The inflation rate will fall moderately during the next few months and start rising in the latter half of 1982.

GARY–HAMMOND EAST CHICAGO (Calumet Area)



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November 20, 1981

Our March 1981 forecast slightly overstated the pace of the recovery from the 1980 recession by less than 1%. We had not expected the sizable decline in manufacturing. Much of the drop was, however, external and could not have been detected by the econometric model. We hope that the closings of Pullman Standard, ECI, and Rand McNally and the contemplated closing of Graver Tank are nonrecurrent events. The nonmanufacturing sector performed somewhat better than we had forecast, gaining over 3,000 more jobs than the model had predicted. We started 1981 with a gradually declining employment deficit as compared to 1980, from a 1,900-job deficit in January to a 400-job deficit in April. The total job deficit for the first four months was 4,200 jobs. By the third quarter of 1981 the deficit for the three quarters, has turned into a surplus of 19,600 jobs over 1980.

The decline in steel employment was almost continuous since the first quarter of 1979, dipping from 69,200 to 66,000 in the first quarter of 1980 and continuing the downturn to 56,600 in the second quarter of 1981. Thus, considering the past long recessionary period, 1981 does not look as bad locally as it appears nationally. And in spite of a loss of about 900

Table 1
SEMIANNUAL SURVEY OF FIRMS
(November, 1981)

	Manufacturing	*Nonmanufacturing*	*Total*
Percent rise in last quarter sales or output	+3.32	16.25	4.12
Percent decline in last quarter sales or output	−5.48	− 5.68	−5.51
Weighted Net Proportion	−2.31	7.32	1.03
Expected percent rise in future sales or output	2.41	11.91	3.35
Expected percent decline in future sales or output	5.09	−15.31	−5.73
Weighted Net Proportion	3.66	− 4.12	−2.99
Percent rise in last quarter prices	2.37	1.44	2.48
Percent decline in last quarter prices	−8.64	0	−7.64
Weighted net percent	−5.42	1.44	−4.99
Expected percent rise in future	2.39	2.33	2.39
Expected percent decline in future	−1.48	0	−1.08
Weighted net proportion	.91	2.33	1.11

Table 2
SEMIANNUAL SURVEY OF FIRMS
(November, 1981)

	Manufacturing	*Nonmanufacturing*	*Total*
Proportion of firms reporting declines and expecting further declines	36.8	8.1	33.7
Proportion of firms whose output rose last quarter but who expect declines	17.6	50.2	20.6
Proportion of firms whose output rose and who expect further rise	26.5	39.1	27.1
Proportion of firms whose output declined, who expect a rise	18.6	2.6	18.6

jobs in September 1981, we still had 4,400 more jobs in steel than in the same month last year. We expect a decline in steel in the fourth quarter and extending to the middle of 1982, with a total loss of jobs roughly equivalent to the 4,400 which were lost in 1980. Thereafter we would expect a turnabout and a gradual increase in steel employment to about 65,000, which appears to be the intermediate term average.

The fact that steel and manufacturing in general is still providing a substantial primary income flow can be demonstrated graphically by the following. Earnings in primary metals are rising at a 5.3% average and have risen 19.8% from August 1980 to August 1981 and 4.3% from July 1981 to August 1981. On the other hand, earnings in the nonmanufacturing sector, which have increased 40.4% over the last year, are beginning to decline slightly at a 0.5% rate. Thus, one would expect a continued rise in real earnings in the region in spite of some loss of jobs.

Monetary policy is expected to be moderately tight. We respond, among several other stimuli, to M1B, that is, money supply in 1972 dollars, with a lead of nine to eleven months. On the average we lose about 390 manufacturing jobs for each percent decline in the index. Since M1B has been falling relative to 1980, we would expect a continued loss of jobs in manufacturing. Out of twelve indicator series and three aggregate series that tend to explain almost 90% of local manufacturing employment, nine are currently declining.

The unknown is consumer spending. Clearly local dollar incomes have been steadily rising at a pace exceeding national rates. Yet retail sales have declined 8.2% which is somewhat below the unprecedented decline of 17.6% in 1980. The indexing of wages overcompensates workers for erosion caused by inflation. (This is not true of wealth or savings.) A 10% raise for a ten-month period when prices rise 1% each month will reduce nominal income only about 5%. Because of the staggered nature of labor contracts and price increases the real incomes of consumers are not likely to fall unless local layoffs greatly accelerate, which is not likely.

Our semiannual survey of local businesses, which leads about six months, is substantially less optimistic than the corresponding March, 1980 panel. Noteworthy is the fact that not a single firm expects to significantly increase its work force. Also, almost 72% of large firms with over 1,000 employees have experienced moderate to substantial losses of jobs (Table 3). Manufacturing continues in a pessimistic mood, as indicated in Table 1. Table 2 indicates that 36.8% of reporting firms have experienced declines in output and expect further reductions in the future. Thus no turnabout is

Table 3
SEMIANNUAL SURVEY OF FIRMS
(November, 1981)

	Total	*Small Firms, under 100 Employees*	*Medium Firms, 100-1000 Employees*	*Large Firms, over 1000 Employees*	*Manufacturing*	*Nonmanufacturing*
Proportion of firms who experience a moderate decline in employment	33.8	19.0	46.4	38.1	34.6	25.0
Proportion of firms who experience a significant decline in employment	9.1	9.5	10.7	33.3	10.3	–
Proportion of firms who experience no change in employment	45.4	54.8	39.3	14.3	43.6	2.9
Proportion of firms who experience a moderate increase in employment	7.8	9.5	3.6	14.3	9.0	25.0
Proportion of firms who experience a significant increase in employment	3.9	3.9	0	0	2.6	25.0
Percent of firms who expect a moderate decline in employment	20.0	12.5	32.1	14.3	22.4	0
Percent of firms who expect a significant decline in employment	4.0	2.5	7.1	0	3.9	10.1
Percent of firms who expect no change in employment	68.0	80.0	50.0	71.4	68.4	49.9
Percent of firms who expect a moderate increase in employment	8.0	5.0	10.7	14.3	5.3	50.0
Percent of firms who expect a significant increase in employment	0	0	0	0	0	0

Table 4
SEMIANNUAL SURVEY OF FIRMS
(November, 1981)

	1981 3rd Quarter (actual)	*1981 4th Quarter (forecast)*	*1982 1st Quarter (forecast)*	*1982 2nd Quarter (forecast)*
Total employment	250.6	259.21	251.03	249.8
Manufacturing employment	90.3	91.57	91.69	90.73
Steel employment	62.2	61.58	62.06	62.94
Nonmanufacturing employment	160.2	162.64	159.34	158.9
Wholesale and retail trade	51.6	53.1	50.8	51.8
Public employment	31.5	32.03	33.37	32.09

expected soon. Table 4 gives the predictions from the Northwest Indiana Econometric Model.

FORT WAYNE

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November 20, 1981

The Fort Wayne-area economy for 1981 is continuing an unabated downslide that began in mid-1979. The most optimistic outlook for year-end 1982 is for modest improvement over current conditions; however, this can easily be reversed by new chapters in the International Harvester saga.

From December 1979 through December 1980, seasonally adjusted wage and salaried employment in the Fort Wayne SMSA (Adam Allen, DeKalb and Wells Counties) declined by 11,400 to 173,200. In the first six months of 1981 preliminary data indicate the loss of an additional 2,500 jobs. Although employment turned up sharply in the third quarter to regain the 2,500 jobs, the brief momentum is likely to be reversed given the recent downturn in the national economy.

Dissection of area employment trends is even more illuminating. During the last year, employment in electrical equipment manufacturing increased by 2,300, while transportation equipment and government employment decreased by 1,100 and 800. Restated, area electrical equipment manufacturing (e.g., Magnavox) was stimulated by increased federal defense spending but transportation equipment was depressed by International Harvester's dramatic retrenching. Nonmanufacturing employment was depressed by (1) the negative multiplier effects of reduced "basic" employment on the service sector and (2) the reduction in federal nondefense spending. In fact, the negative multiplier effect has yet to run its course as epitomized by the continued closing of numerous service activities.

Given the emphasis on International Harvester, one may conclude that IH "is" the area economy. This is not the case in that IH's current employment of 6,500 constitutes less than 4% of area employment. However, when economists forecast change in economic activity, IH—or any other relatively large employer—can easily become the dominant factor. For example, the forecast last year was for the economy to regain by year-end 3,500 to 5,000 of the jobs lost in 1979. It appears now that if there is any change in employment, it will be slightly negative. Although the absence of IH's problem would not have totally salvaged last year's forecast, it certainly would have helped make the forecast more credible.

The forecast for 1982 is for an increase of 1,000 to 2,000 in wage and salaried employment by year-end (as compared with third quarter 1981 employment, currently estimated to be 174,500). Although the forecasted change is minimal, the internal dynamics are likely to be significant. Employment is expected to trend downward through the second quarter of 1982 before turning upward. Within the manufacturing sector, further gains in electrical equipment employment are likely to be offset by further erosion of transportation equipment employment. Nondurable goods employment will increase but the overall contribution will be small because the sector is small—only 12,500 employed currently. The nonmanufacturing sector will remain under constant pressure as a result of (1) reduced contract construction activity, (2) reduced government employment, and (3) continued adjustment—contraction—to the reduction in "basic" employment occurring since 1979. One forecast-related assumption is that no major plant closing or relocation will occur in the Fort Wayne area, although the significant probability of such has to be acknowledged. The only positive risk apparent to the forecast is if IH (or a successor) were to contract operations with a "circling of the wagons" at the Fort Wayne facilities, resulting in a significant increase in employment from the current level.

Single family new housing construction in Allen County is essentially dead. Building permits have been running in the neighborhood of 30 per month in 1981, and we will be fortunate if they total 400 for the year. This compares with 714 last year–which was then a record low for the 14-year period for which data are available. Realization of 400 permits in 1981 would be 80% below the 1978 peak year total of 1,984 permits. Given the sustained reduction in employment in the area and the accompanying exodus of families, there is undoubtedly a substantial inventory of existing housing. Thus a reduction in mortgage rates is a necessary but not a sufficient condition for revival of this sector of the area economy. New single family building permits should total 500 to 600 in 1982, a large percentage increase but still an anemic performance.

Area retail sales–using seasonally adjusted monthly department store sales as the available proxy–have grown in line with the national economy in 1981. The forecast had been for area retail sales to outperform the national economy because of an expected snapback from the 1979-1980 IH strike; however, this did not occur. The 1982 forecast is that area retail sales will be up 8 to 10% (year-average over year-average) with 6 to 7% being the result of inflation. The recent opening of the Dayton-Hudson store will increase Fort Wayne's image as a regional shopping center.

In summary, the forecast for the Fort Wayne-area economy is that it will have minimal growth in 1982 but that the direction at year-end will be distinctly upbeat.

MUNCIE–ANDERSON

ROBERT J. JOST
Professor of Economics
Ball State University

November 24, 1981

At midpoint of the final 1981 quarter the nation's economic activity falls sharply, following two lackluster quarters of slightly negative real GNP. This eighth post-World War II recession follows close on the abbreviated, but sharp, 1980 downturn. Even before the cyclically sensitive economies of Anderson and Muncie could recover from the last recession they have been drawn down into another.

A more meaningful perspective of the plight of these two SMSAs comes from tracing their paths through the previous two cyclical downturns.

The 1973-1975 recession was by far the most serious downturn since World War II and hit the Anderson-Muncie areas with especial severity. Employment dropped precipitously for Anderson and Muncie during the fourth quarter of 1974, as, to a lesser degree, it did for Indiana. The economies of both the nation and Indiana troughed in March 1975; Indiana's employment surpassed its fourth quarter 1974 total by the second quarter of 1976. Anderson, however, which overall experienced a substantially better recovery than Muncie, nevertheless shared the latter's misfortune and did not surpass fourth quarter 1974 employment totals until the second quarter of 1977–one year after the state.

What accounts for the differing experiences?

Durable goods manufacturing, concentrated in Anderson's Guide and Delco Remy divisions, constituted 46% of Anderson's employed labor force in first quarter 1974. Durable goods manufacturing had declined by over 12% by the end of the first quarter of 1975, but still remained 4% below the 1974 total by second quarter 1977. Thus the recovery of the Anderson employment came partially from sources other than the then-thriving auto industry–to wit, modest increases in finance, insurance, real estate, retail and wholesale trade and services. In part, of course, the deficiency in durable goods employment reflected the exporting of Anderson jobs to new GM plants in the South. (See *IBR* Nov.-Dec. 1979 and June 1980.)

Muncie's share of employment in durable goods manufacturing in first quarter 1974 was 29%, roughly comparable to that of the state, but it was still 17% below the first quarter 1974 total by the second quarter 1977. However, given Muncie's much more diversified economy, it was able to realize far more substantial offsetting gains in wholesaling, services, government etc.

The long and the short of it is that durable goods manufacturing decreased substantially in both Muncie and Anderson during the cyclical downturn, but Anderson's durable goods recovery more significantly mirrored the brisk recovery of automobile sales following the cyclical trough of March 1975.

The ability of the nation's auto sector to weather OPEC's quadrupling of oil prices was partially facilitated by existing price controls on gasoline and fuel oil and an additional maze of formal controls thrust on the petroleum industry by Carter's newly created Department of Energy–all of which tended to insulate the consumer from much of the negative effect of the fourfold increase in world petroleum prices. Thus, petroleum consumption resumed its upward trend in the mid-seventies and the Big Three, after some hesitation, again generally opted to invest in the production and marketing of large gas guzzlers. The second OPEC oil crisis, following the Iranian revolution in early 1979, and the subsequent phased decontrol of petroleum prices, caused gasoline prices to double in the U.S. It also caused a seminal change in attitudes toward energy conservation, as the market mechanism achieved conservation goals that had previously eluded presidential admonishment. The auto industry was among the first energy-intensive industries to be affected as consumers opted for small, energy-efficient, foreign-made models that Detroit was not yet adequately equipped to produce. Sales of domestically-produced cars turned down in 1979 and plummeted to 6.5 million in 1980. They will total, approximately, an even more anemic 6.3 million in 1981. By this year foreign car sales had garnered 26% of the U.S. market.

These adverse changes are reflected in Anderson's employed labor force. A labor force of 57,000 in the second quarter of 1979 diminished to 49,000 by third quarter 1981–a 14% decline. Employment in durable goods production declined a whopping 25%. For the same time frame Muncie's employment was down 7% and durable goods employment declined 16%.

The pattern of layoffs at Anderson's Delco Remy and Guide divisions, began in July and August of 1979, less than two quarters after the second OPEC oil crisis, and escalated with the decline in auto sales. By July 1980, roughly one-third of the hourly workers of the two divisions were on layoff. Recalls commenced in the summer of 1980. Though Guide fared better than Delco Remy in this regard, the recovery was anemic when measured by past cyclical standards, as the previously cited employment figures attest.

Given the nation's economy, now in freefall, and the abysmal reception of the 1982 auto models during the fourth quarter, the near-term outlook for the only partially recovered Anderson-Muncie economies can best be described as bleak. Additional layoffs can be expected at Delco Remy, Guide, and Muncie Chevrolet during the balance of the fourth quarter. The outlook for 1982 will be dependent, in large part, on the depth and duration of the nation's recession. The very uncertain but crucial determinants of that depth and duration would appear to be the level of consumer spending during the holiday season and the extent of the decline in long-term interest rates and prices.

If one assumes a scenario, whereby real GNP declines 5% during fourth quarter 1981 and 2% during first quarter 1982, and domestic auto sales remain close to their present state of the doldrums well into the spring of 1982, then employment in the Muncie-Anderson area may continue its tortuous descent through first quarter 1982.

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The Indiana University School of Business Division of Research

Indiana Business Review

Volume 57 February, 1982

Morton J. Marcus — **In This Issue/2**

George M. Smerk — **South Shore Update/2**

Frank Kushman — **Indiana's Business/3**

South Shore Update

In this issue

This is the first issue of the *Indiana Business Review* in its new format. Readers of this service from the Indiana University School of Business have become accustomed to six bi-monthly issues of the IBR and eleven issues of a companion Data Supplement. In response to budgetary constraints and changes in the information environment, a new IBR has been designed.

Until the times do alter, the *Indiana Business Review* will be issued monthly, except in January. The Data Supplement no longer exists, but much of its content will appear in these pages. Monthly notes and commentary on the state's economy will be found under the heading "Indiana's Business." Data contained in this new IBR will focus on the state and offer some contrast between the state and the nation. Data concerning national economic indicators are now so widely available they need not be repeated in these pages.

To get this new venture on the right track, Professor George Smerk offers an update on the activities and prospects for the South Shore Line and commuter travel in northern Indiana.

This month Indiana's Business reviews the Hoosier economy in 1981 with the finding that there was improvement for the year, albeit slight, from the dismal performance of the preceding year.

Long term readers of the IBR will note that the reincorporation of the Data Supplement and resumption of monthly issuance returns the IBR to its status of the fifties and sixties. This current change in format is intended to sustain the realiability of this service and the responsive, innovative leadership which has characterized the IBR over many decades.

Morton J. Marcus
Editor

GEORGE M. SMERK

Professor of Transportation, Indiana University, School of Business; Governor's Trustee to the Northern Indiana Commuter Transportation District

Introduction

The Chicago South Shore and South Bend Railroad—the South Shore Line—is a unique Hoosier institution. It is the last of a long line of electric interurban railroads that once served many parts of the United States. Interurbans were once ubiquitous in Indiana; a network of lines radiated from Indianapolis in all directions and another group of lines, including what became the South Shore, crossed the northern part of the state. All are gone now except the South Shore. Over the years, the South Shore has changed from a typical interurban line to a commuter passenger railroad linking northwestern Indiana with Chicago's Loop. The line also carries substantial amounts of freight, particularly coal, to electrical generating plants and steel mills in northern Indiana.

There have been earlier reports in the *IBR* that cover the South Shore through late 1979.[1] In this article, readers will be brought up to date on what has happened with the South Shore. The motto of the railroad in recent years has been "The Little Train That Could," found on a decal of a cartoon train making its whimsical way to Chicago. The events of the recent past, of the present, and of the near future will help assure that "The Little Train That Could" will become "The Little Train That Will."

The refurbishment of the South Shore comes under the jurisdiction of the Northern Indiana Commuter Transportation District (NICTD). The district, which was created under Indiana state law, embraces Lake, Porter, LaPorte, and St. Joseph counties, through which the railroad operates. Financial support includes a special state appropriation to help match the federal capital grant that will pay for 80% of the capital improvements; the state money is matched with an equal sum of local dollars. The proceeds of the indefinite situs tax on leased rail cars also goes to NICTD through the governor and is used primarily to help match federal operating aid. The district also uses the funds from other federal programs, mainly operating aid, as well as the state matching funds available to all transit operations in the state to help match federal aid programs.

The work to be accomplished in the refurbishment program includes the purchase of new cars to replace the present equipment, which was new in the 1920s; replacement of the electrical substations that feed current to the overhead electrical system; the construction of additional substations to assure sufficient power; and changes in the maintenance facilities to handle service and repair work on the new cars. Some changes will be needed at the Randolph Street terminal in Chicago in order to handle the new cars. They will be about seven and one-half feet longer than the present cars, too long to use the existing curved Randolph Street platforms.

In early 1980, ridership increases were the most gratifying development. Despite serious interruptions in service in the first three months of 1979, because of problems with snow shorting out the traction motors on many cars, ridership on the South Shore in 1979 actually exceeded that of 1978. The ridership increase continued in 1980 at an almost alarming pace. Ridership was up over 36%, or approximately 600,000 additional passengers, in 1980 compared to 1979.

Reasons for increased patronage are not too hard to find. The rising price of gasoline and the high cost of parking in Chicago meant that using the South Shore to commute back and forth to work or to shop was much more economical than any of the alternatives. Patronage continued to grow at a rate that should show about 400,000 additional riders in 1981 over 1980. Without the service interruptions suffered in several previous years as a result of very hard winter weather (the winter of 1979 was the worst of a bad lot of

Continued on pg. 4, col. 3.

Indiana's Business

1981 IN REVIEW

1981 started with the economy in a recovery which proved to be short-lived. As the year progressed, Indiana's business conditions deteriorated. In total, based on preliminary analysis, 1981 was a slight improvement in selected measures over the weak performance of 1980.

UNEMPLOYMENT AND EMPLOYMENT

Indiana's seasonally adjusted unemployment rate rose one half percentage point in December to 11.9%. The national rate also climbed one half percentage point to 8.9%. Both of these are the highest monthly rates recorded by each measure since the Korean War. December also marked the 30th consecutive month in which Indiana's jobless rate was above the national rate. (See **Figure 1**)

For the year, Indiana's unemployment rate dropped from 9.8% in 1980 to 9.6% in 1981. These figures are subject to revision. Last year's decline in the jobless rate was caused not only by a decline in the number of unemployed, but also by a decline in the total size of the state's labor force. Specifically, Indiana's labor force shrunk by 24,000 people in 1981. This was accompanied by a decline of 14,000 employed and a drop of 10,000 in the number of unemployed.

Nonmanufacturing employment in Indiana declined by 20,200 in 1981 following a decline of 24,000 in 1980. Total manufacturing employment in the state leveled off in 1981, dropping a mere 0.2% after a 10.2% decline in 1980. It can be hoped that manufacturing employment bottomed out in 1981. The number of Hoosiers employed in manufacturing in 1981 was at the lowest level since 1975.

PER CAPITA PERSONAL INCOME

Third quarter 1981 nominal per capita personal income in Indiana rose to $9,756 from $8,990 in the third quarter of 1980, an 8.5% increase. The comparable national figure reached $10,605 in the third quarter of 1981, up 10.8% from a year earlier. After adjustment for an inflation rate of 8.3%[1] over this period, real per capita personal income rose only 0.2% in Indiana and 2.3% in the U.S. 1981 makes the 11th consecutive year in which the national per capita personal income has been higher than Indiana's.

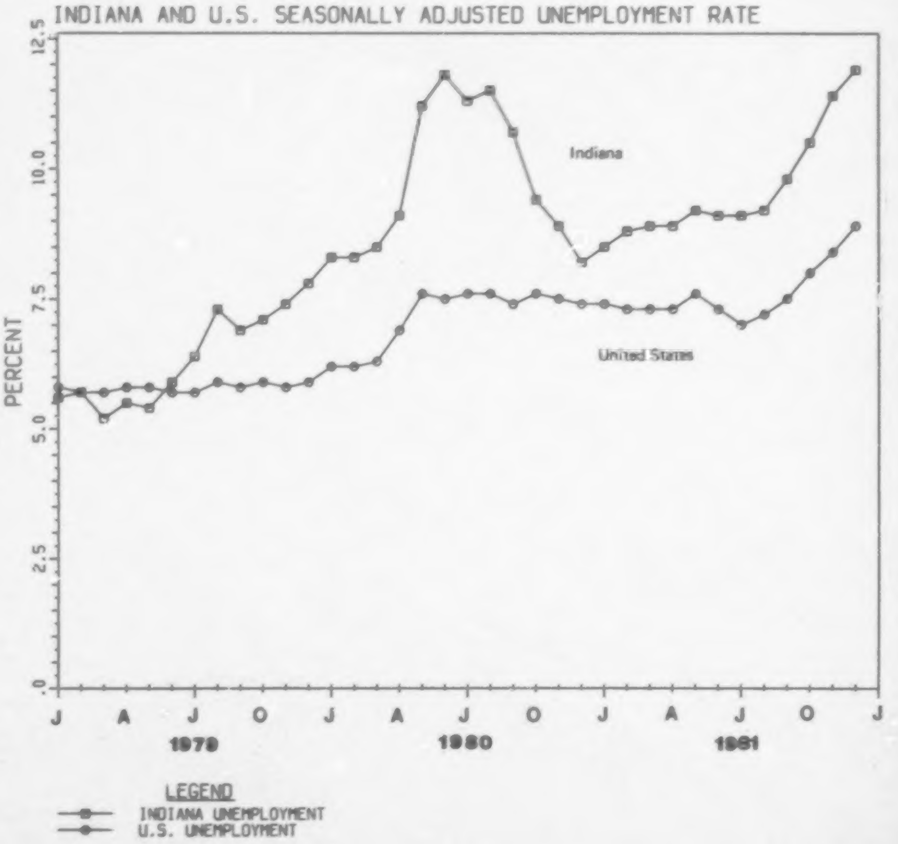
HOUSING STARTS

Last February's review of Indiana's business reported housing starts in 1980 were the lowest recorded in the state since 1960. In 1980, 21,262 new units were started. Last year, 1981, outperformed 1980 by 6.3% with 22,591 new starts. 1981, nonetheless, remains barely half the 1978 figure, whan 42,710 new units were started in Indiana.

CONSTRUCTION SPENDING

Last year's review of 1980 also reported total construction spending, in current dollars, was then at its lowest level since 1976. This dubious honor can now be turned over to construction spending in 1981. For the year, construction spending

Figure 1



in Indiana totalled $2.78 billion, 10.8% below 1980 and only half of the amount spent in 1978, Indiana's peak construction spending year.

Most of the decline in construction spending was due to a dramatic reduction in expenditures for public works and utilities. As can be seen from Figure 2, spending for public works and utilities dropped 21.5% in 1979, 70.5% in 1980, and another 30.5% in 1981.

Residential construction spending improved 4.8% in 1981 compared to 1980. For the year spending totalled $1.03 billion. Nevertheless, residential construction spending remained 36.4% below the $1.6 billion spent in 1979.

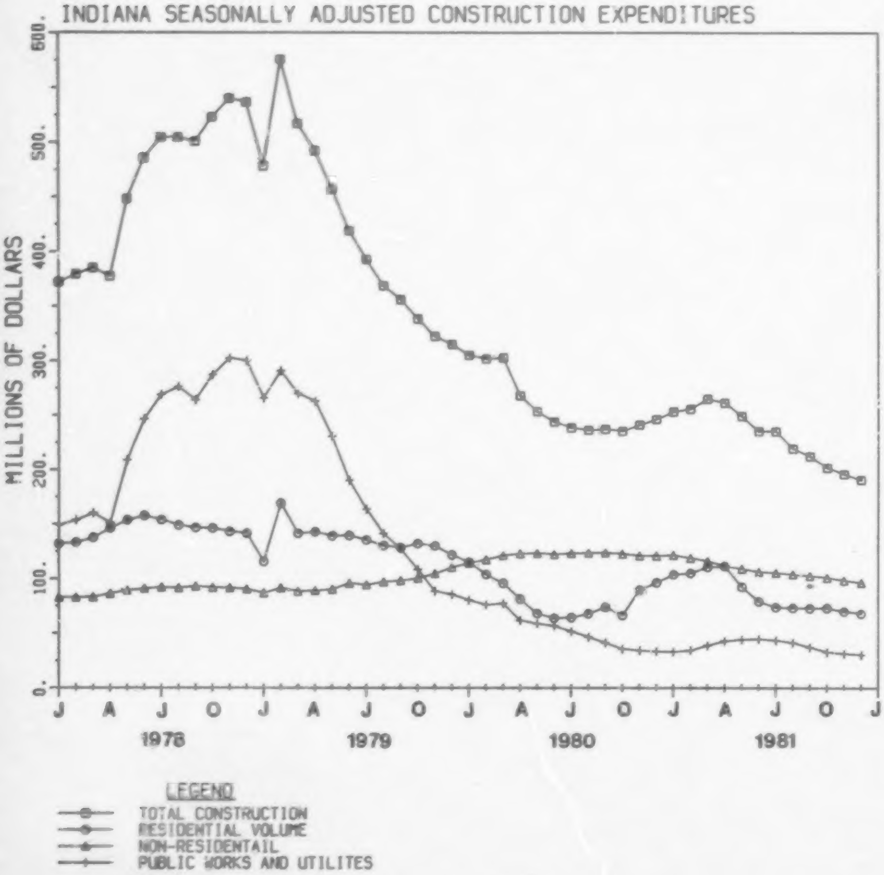
Non-residential construction expenditures increased 27% from 1979 to 1980, and then fell 11.4% in 1981. Therefore, 1981 non-residential spending, though down from the previous year, remained 12.6% above 1979.

CAR REGISTRATIONS

In 1980 total new car registrations in Indiana dropped to their lowest level since 1961. When the December registration figures are released, 1981 could be even worse than 1980. Through November registrations totalled 171,268 in 1981, down 5.5% from the 181,206 registrations in the first eleven months of 1980. In Indiana's peak year for car registrations, 1977, 264,914 registrations were recorded (through November), more than 50% higher than the 1981 figure.

Both domestic and import car registrations were down in 1981. Domestic registrations were 4.8% below 1980 and represent 82% of Indiana's market. Imports captured 18% of Indiana's 1981 market, but had 9.7% fewer registrations than the previous year and 12.2% fewer than 1979.

Figure 2



RAW STEEL PRODUCTION

One of the bright spots in the Indiana economy in 1981 was raw steel production. Indiana's 1981 output of 22.7 million tons exceeded 1980's output of 19.4 million tons by 14.5%. The 1981 figure also nearly matched 1979 steel production of 22.9 million tons. Indiana's share of the nation's raw steel production climbed from 17.8% in 1980 to 18.9% last year and in the last few months of the year was the nation's leading producer of raw steel.

Frank Kushman

[1] Percentage change in the implicit price deflator for Personal Consumption Expenditures from 1980:3 to 1981:3.

SMERK, CONTINUED

winters), South Shore service was quite dependable through the balance of 1979, all of 1980, and the first half of 1981. Some delays occurring regularly on trains bound for Chicago in the morning rush were due to severe overcrowding on the trains, which slowed the boarding process.

In 1980, NICTD sought bids for the construction of the new commuter cars. Original predictions were that the entire

UNITED STATES-INDIANA BUSINESS INDICATORS*
(Seasonally adjusted indexes unless otherwise noted; base period: 1967 = 100)

	United States				*Indiana*			
	Latest Month		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
EMPLOYMENT								
Nonagricultural employment	Dec.	138.6	139.1	138.2	Dec.	117.5	117.7	120.8
Manufacturing employment	Dec.	101.7	102.9	103.7	Dec.	87.3	89.2	92.3
Average Weekly hours (No.)†	Dec.	40.0	39.6	40.8	Dec.	39.5	39.3	41.7
Average weekly earnings ($)†	Dec.	330.40	324.32	314.16	Dec.	378.80	375.71	378.64
Nonmanufacturing employment	Dec.	154.1	154.1	152.7	Dec.	138.2	138.2	140.5
Unemployment rate (%)	Dec.	8.9	8.4	7.4	Dec.	11.9	11.4	8.6
Unemployment-Married males (%)	Dec.	5.8	5.1	4.3	–	–	–	–
Continued unemployment claims	–	–	–	–	Dec.	513.1	407.1	411.3
PRODUCTION								
Bituminous coal production	Nov.	156.3	158.8	150.0	–	–	–	–
Industrial electricity production	Sept.	149.2	152.4	147.8	–	–	–	–
Industrial electricity sales	–	–	–	–	Dec.	89.1	150.7	168.3
Manufacturing production	Dec.	141.7	145.1	150.4	Dec.	131.9	142.4	147.1
Raw steel production	–	–	–	–	Dec.	103.1	109.1	139.8
CONSTRUCTION								
Construction activity-total	Nov.	297.3	296.7	302.5	Dec.	169.1	173.8	218.1
Residential housing starts	Dec.	76.1	67.2	119.5	Dec.	92.9	58.7	113.6
Residential expenditures	Nov.	305.7	308.1	376.7	Dec.	193.9	199.5	273.4
Nonresidential expenditures	Nov.	293.2	291.1	266.2	Dec.	195.3	199.3	245.6
Public expenditures	Nov.	207.0	201.1	208.1	–	–	–	–
Public works and utilities	–	–	–	–	Dec.	1034.8	108.3	115.4
OTHER INDICATORS								
Personal income per capita ($)[1]	Nov.	10,776.50	10,723.30	9,873.70	1981:3	9.756.00	9,603.00	8,990.00
Passenger car sales (thousands)†	Dec.	522.0	585.0	640.0	Nov.	11.3	13.7	15.0
Year to date (thousands)	Dec.	8,527.0	8,005.0	8,981.0	Nov.	171.3	160.0	181.2

*Current indicators are preliminary and subject to revision
†Not seasonally adjusted

[1] Indiana's per capita personal income are quarterly data

SOURCES: Data on Indiana construction from McGraw-Hill Information Systems Company; Indiana passenger car registration from R.L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

capital improvement program would cost about $36 million. The bids for enough cars to move 4,500 seated passengers at the peak were well over what had been expected: The Budd Company bid over $40 million for forty-three cars, and Sumitomo Corporation of America bid approximately $39 million for forty-four cars. NICTD decided to cut back on the number of cars to stay within its budget.

In conjunction with its engineering consultants, NICTD sought a simple and robust car that would be speedy, attractive for riders, and easy to maintain. In the fall of 1980, a contract was made with the Sumitomo Corporation of America for the delivery of thirty-six electric commuter rail cars. These cars, which are to be built of stainless steel, are to be eighty-five feet long. They are to be first-rate commuter cars based generally on the design of the so-called Silverliner cars built by the Budd Company for commuter service in the Philadelphia area. All the cars ordered are to be equipped with electric motors.

Despite the satisfaction of finally having the cars on order, the increase in ridership made it clear that there was simply not enough capacity in the thirty-six cars to meet any passenger growth whatsoever. In 1981 many passengers had to stand during the rush hour for rides of considerable distance. Indeed, if the new, higher capacity cars had been in use in the first part of 1981, there would have been capacity to seat only the present rush hour ridership; there would be no capacity for additional patrons.

The need for additional cars is really a need for additional financial support. NICTD worked closely with the 1981 Indiana General Assembly to help solve this problem, and out of that cooperation came an additional source of money. The county taxes collected from the South Shore Railroad will hereinafter revert to NICTD. These taxes amount to $150,000 to $200,000 a year. NICTD also received bonding authority, and the regulatory jurisdiction over the South Shore's rates and service that was formerly vested in the Public Service Commission of Indiana. The plan tentatively developed in the summer of 1981 is for the district to issue bonds and use the receipts to purchase additional cars. The most likely acquisition will be the purchase of eight driving trailers.[2] Negotiations will be carried on with Sumitomo to see whether straight trailers, driving trailers, or, if the price differential is not too great, even more motor cars will be purchased. If the right price can be agreed to, motor cars will be purchased because they will probably never be cheaper. Then, if more cars are needed in the late 1980s, driving trailers will be purchased.

Another project under consideration is a new terminal for the South Shore at South Bend. The Michiana Regional Airport Commission has been building a multimodal terminal at the airport site. In addition to airplanes, the west end of the terminal contains a facility for both intercity bus and local bus service. There is space at the east end of the terminal for the South Shore. A long freight spur from the main line of the South Shore passes to the south of the airport, the track being immediately north of the Bendix plant; it then turns north into and then alongside Bendix Drive. The freight line passes within fifty feet of the airport property. The

INDIANA INDUSTRIAL ELECTRICITY SALES
(Seasonally adjusted in millions of kilowatt hours)

Reporting Cities	*Dec. 1981*	*Nov. 1981*	*Dec. 1980*	*Percent Change From* *Previous Month*	*One Year Ago*
Anderson	20.6	18.8	22.5	9.6	– 8.4
Bedford	11.0	14.2	16.2	–22.5	–32.1
Bloomington	4.3	4.1	3.1	4.9	38.7
Columbus	15.4	18.5	18.6	–16.8	–17.2
Connersville	7.5	9.6	9.8	–21.9	–23.5
Crawfordsville	10.6	12.1	9.7	–12.4	9.3
East Chicago	22.7	23.5	30.8	– 3.4	–26.3
Elkhart	22.4	21.5	22.3	4.2	0.4
Evansville	41.1	46.7	41.4	–12.0	– 0.7
Fort Wayne	39.8	42.2	45.8	– 5.7	–13.1
Frankfort	8.2	8.9	7.5	– 7.9	9.3
Gary	164.0	141.8	203.6	15.7	–19.4
Goshen	7.9	8.3	8.7	– 4.8	– 9.2
Hammond*	52.5	52.1	57.5	0.8	– 8.7
Huntington	4.3	4.7	5.4	– 8.5	–20.4
Indianapolis	320.1	314.7	315.6	1.7	1.4
Jefferson	5.9	6.0	6.2	– 1.7	– 4.8
Kokomo	57.2	63.3	66.2	– 9.6	–12.6
Lafayette	36.8	39.3	37.1	– 6.4	– 0.8
LaPorte	13.8	14.8	15.1	– 6.8	– 8.6
Logansport	9.5	10.1	8.8	– 5.9	8.0
Madison	2.4	2.5	2.5	– 4.0	–4.0
Marion	25.4	27.9	30.0	– 9.0	–15.3
Michigan City	42.6	43.8	45.2	– 2.7	– 5.8
Muncie	11.8	13.3	17.2	–11.3	–31.4
New Albany	4.7	5.2	5.1	– 9.6	– 7.8
New Castle	6.4	8.6	8.0	–25.6	–20.0
Peru	4.9	5.2	5.5	– 5.8	–10.9
Richmond	22.3	–	21.8	–	2.3
Seymour	2.2	2.5	2.4	–12.0	– 8.3
South Bend	28.1	25.4	27.6	10.6	1.8
Terre Haute	27.4	27.7	30.6	– 1.1	–10.5
Valparaiso	8.7	8.7	–	0.0	–
Vincennes	2.7	3.2	3.8	–15.6	–28.9
Wabash	6.3	8.0	7.4	–21.3	14.9
INDIANA	**1005.3**	**1744.7**	**1397.2**	**–42.4**	**–47.0**

*Continued unemployment claims of East Chicago and Hammond are combined.

Airport Commission already has the funds in hand to build the railroad line across the airport property and into the terminal. The city of South Bend is working on a plan to move the tracks out of the middle of Bendix Drive to the east side of that street and to provide signals at the grade crossings for safety purposes. There are still a number of questions to answer about this project and there is a need for some additional funds to pay the operating cost of running trains into the multimodal terminal. At this time it is still not certain that the South Shore will be extended into the airport.

The South Shore corridor is currently the subject of a marketing study. The study is supported with a grant from the Urban Mass Transportation Administration's Office of Transit Management. This study is aimed not only at the promotion of travel on the South Shore but also includes market research on the tie-ins necessary with local transit services in South Bend, Michigan City, Gary, Hammond, and East Chicago in Indiana, and Hegewisch in Illinois. Ways of encouraging off-peak travel to help balance the levels of traffic on the railroad will also be researched. Much-needed revenue could be gained if more persons would travel during off-peak hours and would make use of otherwise underutilized rolling stock and personnel. The National Lakeshore Park near Michigan City should provide considerable potential for developing off-peak ridership.

Consultants have also recommended the closing of and the rearrangement of some existing stations. Fairly recent studies conducted by the railroad, and by consultants hired by NICTD, show that many stations have generated few or no passengers during a typical day. Those unused stations will be closed. In other cases, stations built in the 1920s will be relocated to meet the needs of the present. For example, thanks to the support of Porter County, a new station will be built to serve the Chesterton area. Proposals suggest that the new station be located approximately midway between two existing stations that are not in convenient locations. The new station will be constructed in the neo-Spanish style of the existing Beverly Shores station. Several stations were built to this design in the 1920s, during the era when Samuel Insull owned the South Shore and several other Chicago area interurban lines, and the design was almost a trademark.

Exciting events lie in the near future. The prototype car from Japan was delivered to Michigan City on January 26, 1982. This car will be tested on the South Shore for several months so that engineers can gain data on its performance. Based on these tests, engineering and design changes will be made before regular production begins. The body shells will be produced by Nippon Sharyo Seizo Kaisha, Ltd. for Sumitomo in Japan and shipped to the United States. At Hornell, New York, the bodies will be assembled and the components produced in the United States will be blended in to form the completed cars.[3]

Several problems that are already obvious to the NICTD trustees are bound to cause some difficulties in the future. Operating aid, always a thorny problem, is likely to grow more so. NICTD has never been able to reimburse the South Shore fully for what the railroad claims are its total operating losses from passenger service. There is a need for larger support from either the state or local levels of government. This problem, already serious, is apt to become worse if the Reagan administration is successful in reducing and then eliminating the operating aid the federal government provides to mass transit operations. In December 1981 NICTD signed an agreement with the South Shore guaranteeing to cover all the railroad's losses from passenger service, plus provide a return on investment. NICTD took jurisdiction over fares and the level of service.

The need to bring revenues more into line with costs was one reason for a fare increase of approximately 60% that took place on April 1, 1981. The South Shore management has suggested that service be curtailed significantly outside of the rush hours and has also suggested elimination of all South Shore passenger service on Saturdays, Sundays, and holidays.

The South Shore petitioned the Interstate Commerce Commission for a 12½% fare increase at the end of July 1981, to become effective at the end of August 1981. That increase was to bring South Shore fares in line with those of the other commuter railroads operating in the Chicago area under the jurisdiction of the Northeastern Illinois Regional Transportation Authority (RTA). The ICC approved the rate increase.

On the other side of the coin, there may also be a call for, and a need for, increased service levels. At the present time, there are only two weekday round trips a day between Chicago and South Bend. If the rail line is extended into the multimodal terminal at South Bend, an increase in service will be necessary to make the investment at all reasonable. It is doubtful that this service will pay for itself completely from fares; as noted earlier, additional operating aid, from one source or another, will be needed.

The means to pay operating costs will not be solved easily. Fares will probably be raised again. Ideally this would come when the public is enjoying the full benefits of the capital improvements. If federal operating aid is reduced or eliminated, the situation will be desperate, indeed, and for current levels of service to be preserved—much less for service increases—more money will have to be forthcoming from state or local resources. NICTD does not have any local taxing powers. The state aid program is now useable only as a match against federal grants. If the service is to continue in any but abbreviated form, either more state funds, local taxing authority for NICTD, or both, will probably be necessary. Fare increases and careful marketing of the service will also be needed.

Many people around the United States and from different parts of the world have viewed the South Shore as an interesting, historical relic of the interurban era. In the future, assuming the problems of covering operating costs are solved, it is apt to be viewed as one of the finest commuter railroads in the United States. If this can be achieved—and there is no reason to think that it cannot, given ingenuity and the will to use it—it will be the result of the cooperation between a private company, the Chicago South Shore and South Bend Railroad, and the Northern Indiana Commuter Transportation District. The District, for its part, is the apex of a complicated pyramid of intergovernmental relationships involving two states, four counties, a number of communities, and the federal government. If all goes well, before long Hoosiers will be able to point with pride at The Little Train That Could.

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[1] See Hagi Gil, David Shlay and George M. Smerk, "The South Shore Railroad: Preserving and Improving Commuter Service in Indiana," *Indiana Business Review*, Vol. 53, July-August 1978, pp. 25-28; and George M. Smerk, "South Shore Renaissance," *Indiana Business Review*, Vol. 55, February 1980, pp. 2-9.

[2] A trailer car is one that has no motors but is simply pulled by the other cars. A driving trailer is one that is wired and has control cabs so that a train can be operated from a trailer car even though it is unpowered.

[3] The facilities at Hornell are owned and operated by the General Electric Company. In the early stages of procurement, the NICTD trustees hoped that even if a foreign firm were the successful bidder the cars could be assembled by Pullman at either its Hammond or Chicago works. At about this time Pullman announced its decision to cease building passenger cars.

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Gerhard Rosseger **Strategic Responses to Import Competition— How Different is Steel? / 2**

Frank Kushman **Indiana's Business / 5**

In this issue . . .

Steel is at the heart of Indiana industry. This state is a leader in its production and use. Professor Larry Davis of IU-Northwest has solicited several articles concerning the industry. This month the views of Professor Gerhard Rosegger of Case Western Reserve University are offered on the steel industry and its response to changes in the competitive environment. Next month, additional articles by Professor Davis and others will continue the discussion.

When will this recession end? Economists are looking for answers to that question. Frank Kushman writes in Indiana's Business that one traditional signal may have been given. Shortly we will know if he is correct.

Being correct is important to the *Indiana Business Review*. Last month a technical error led to a report in these pages that Indiana housing starts for 1981 were better than 1980. When the error was discovered, the IBR was in the mail. To set the record straight: Indiana housing starts in 1981 were down 4.5% from 1980's dismal record. Housing starts in this state have dropped by more than 53% since 1978. With local economic conditions so uncertain, with interest rates at continued high levels, with a slow outward drift of the productive population of the state, the housing industry deserves proper reporting. We regret spreading good news when there was none to offer.

Year	Indiana Housing Starts
1978	42,582
1979	33,799
1980	20,779
1981	19,839

Source: F.W. Dodge Division, McGraw-Hill Information Systems Company.

M.J.M.

Strategic Responses to Import Competition—How Different is Steel?

GERHARD ROSEGGER

Frank Tracy Carlton Professor of Economics, Senior Research Associate, Research Program in Industrial Economics Case Western Reserve University, Cleveland, Ohio

INTRODUCTION

In his classic paper, "Retardation of Industrial Growth," Professor Simon Kuznets (1929) adduced a number of reasons for the stagnation of industries, including the retardation of one nation's industry through the competitive influence of a branch of the same industry emerging later in another country. He did not necessarily see stagnation as a permanent condition but suggested the possibility that after ". . . a fundamental change has taken place, . . . a new era may be said to have begun."

When we move below the aggregates of an industry or of a sector to the level of individual firms, we find of course that decision-makers do not accept the historical drift of an "era" as inevitable, but that they devise strategies for fighting back or at least for making the best of a bad situation. Helmuth V. Moltke, the 19th-century Prussian field marshall, is reputed to have defined *strategy* as "a system of escapes." That is a useful definition in the present context.

The formulation of such strategies takes place in the framework of what I shall call a *strategic regime*. By this I mean: 1. Decision-makers' perceptions of the political, economic, and technological environment in which they are operating. Needless to say, these perceptions may involve what Ericson (1980) has called "a misfit between myth and reality." 2. The existing structure of industry, firms, and plants in terms of such factors as vintage, technology, scale, product mix, location, etc. 3. The ease, or difficulty, of access to financial resources with which to implement major new strategies.

I propose that the period from roughly 1960 through the mid-1970s constituted a strategic regime quite different from that prevailing since then. Below I want to examine briefly how four industries—steel, automobiles, tires, and metal-cutting machine tools—were affected by growing imports during that period, and how they responded to this threat to well-entrenched positions. The focus of attention is the steel industry, with the others providing some bases for comparison.

The search for similarities and dissimilarities among affected branches of the economy is of some interest in light of current national policy discussions. On the one hand, we can observe the traditional rent-seeking activities by individual industries, which have to be based on claims to the uniqueness of each petitioner's position, requiring *special* governmental action. On the other hand, there is the presumption that the benefits of *general* policies (described by buzzwords like "reindustrilization") will fall evenly like snow upon the economic landscape, thus making sectoral measures obsolete.

The findings presented here are compressed from detailed case studies of the sample industries—with all that implies for the apparent casualness of selective evidence. The case studies involved analyses of industry and company statistics, surveys of the relevant business and technical literature, and more or less structured interviews with corporate executives and managers.

SOME COMPARATIVE MEASURES OF IMPACT

The steady penetration of domestic markets by imports in our four sample industries is illustrated by Figure 1. Steel mill products and automobiles led the way in the 1960s, but tire and metal-cutting machine tool imports caught up rapidly during the last decade and continued to grow in the years beyond our survey period. In the case of the latter two industries, and to some extent in automobiles, the competitive impact on American manufacturers was further magnified by direct foreign investment in the United States.

Before we turn to some comparative measures of the effect of these developments, we want to put their economic significance into perspective. Table 1 presents a few general indicators of size. Three of the industries are dominated by large firms, whereas the machine tool industry is comprised mostly of small to medium-size enterprises. All four have in common a heavy concentration of establishments in the North Central and Middle Atlantic states. This fact, combined with differences in import penetration among geographic markets and product categories, means that the economic effects of foreign competition are frequently much greater than is suggested by aggregate industry statistics.

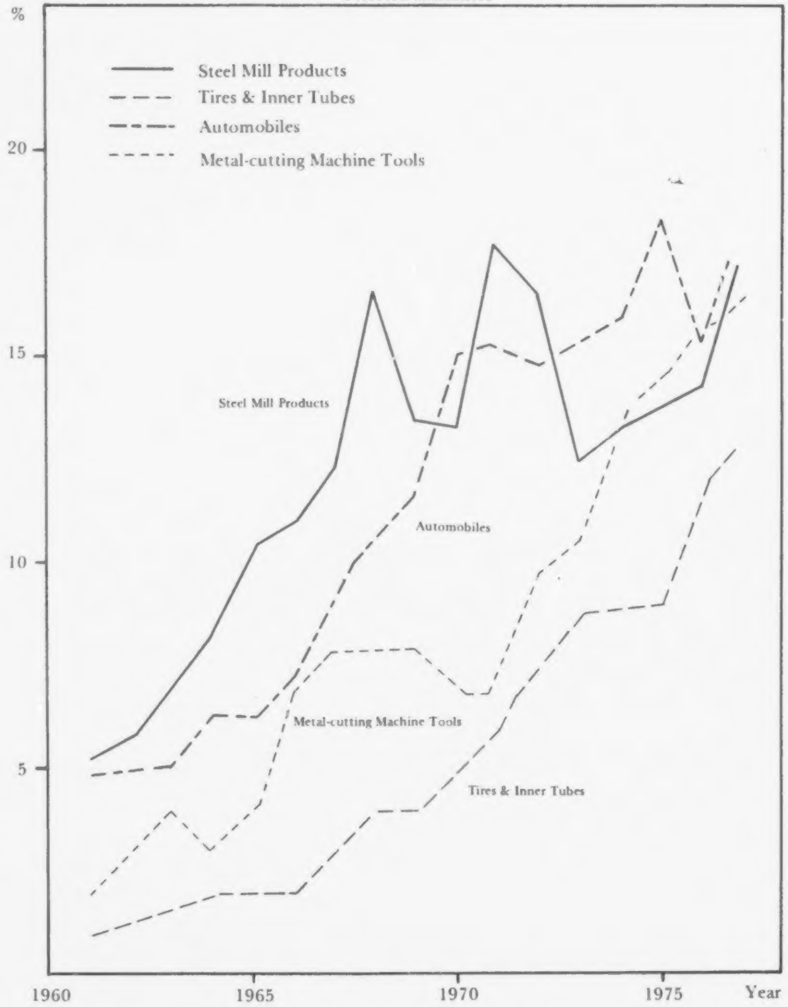
For purposes of comparison, we constructed a number of indexes of impact, standardized to the annual average for the period. Two of these are presented here. They suggest that the four industries have one feature in common: during our survey period the rise of imports was accompanied by stagnation but not by a decline of domestic sectors.

Figure 2 shows the development of the value of shipments, in constant-dollar terms. Each of the industries follows a roughly similar pattern: expansion until approximately 1965 and from then on fluctuations about a more or less horizontal trend. It is worth noting that cyclical swings were much less pronounced in the case of steel than in the other branches, with machine tools—not too surprisingly—showing the widest fluctuations.

This picture of stagnation is further confirmed by Figure 3, which traces the impact on employment, the indicator of greatest public concern. Again we observe much less pronounced fluctuations for steel than for the others. Of course these aggregate data hide a number of interesting stories, such as the effects of plant closings and relocations, as well as changes in the structure of the labor force.

It does not follow from this evidence that the domestic industries would have had either the capacity (in quantitative or

Figure 1
Imports as Percent of Domestic Supply, 1961–76
Selected Industries



Sources: *Survey of Current Business;*
AISI, *Annual Statistical Report;*
MTBA, *1979/1980 Economic Handbook.*

NOTE: Unless otherwise indicated, data shown in diagrams are based on calculations derived on statistical series in U.S. Department of Commerce, *Annual Survey of Manufactures, Industry Profiles* (Washington, D.C., U.S. Government Printing Office).

qualitative terms) or the right products with which to capitalize on the market growth apparently captured by imports. The point would hardly be worth making, were it not for the fact that arguments for special protection have been so frequently based on the, at least implicit, assumption that import-competing industries are playing a zero-sum game against their foreign rivals. In spite of all the carefully worked-out econometric models, the only safe thing we can say is that we do not know what *would have* happened to these industries' revenues, had it not been for import competition. Although jobs were obviously lost to imports at the margin, we should also remind the parties concerned that calculations of how many jobs *might have been* gained in the absence of imports make for an unconvincing argument.

RECOGNITION OF MARKET THREATS

Perceptions and expectations, whether justified by the wisdom of hindsight or not, make up important elements of a strategic regime. For our purposes, the recognition of the seriousness of threats posed by imports and interpretations of the bases for such threats by decision-makers play an especially significant role in eliciting strategic responses.

There are some striking similarities in the ways in which firms in our sample industries reacted to the growing inroads of foreign products. To divide these reactions into phases is something of an artifice, but this procedure enables us to point to considerable differences in the *speed* with which decision-makers responded. A few benchmarks must suffice to tell the story.[1]

For want of a better term, I shall call the first phase "the changed world economy" explanation. The revival of Western Europe and the growth of Japan's industrial power were seen as leading quite naturally to increased worldwide competition, with some of it spilling over into U.S. markets. But these inroads were given no greater significance than were other competitive challenges, such as those from substitute products. Even more important, the tenor of these assessments was that opportunities for the growth of American exports would more than offset whatever small footholds imports might gain. In the steel industry, this was essentially the position in the late 1950s and very early 1960s. The general tone of *The Competitive Challenge to Steel* (AISI, 1961) provides a good illustration. In the other industries, this interpretation persisted well into the sixties, buoyed in some cases (especially in machine tools) by a satisfactory export performance in connection with U.S. foreign assistance programs.

In the steel industry, it was quickly conceded that imports might do especially well in the markets for low-priced products, such as reinforcing bars, wire and wire manufactures, but the only inference drawn was that this development ought to stimulate efforts to export more of the sophisticated products. The "low end of the market" interpretation persisted well into the 1970s in the case of metal-cutting machine tools; domestic manufacturers felt quite secure in what was then considered the "high-technology" segment. The persistence of this myth in the face of overwhelming evidence to the contrary is puzzling; as late as January 1980 the chief operating officer of a large firm claimed that much of the import business is in "standard tool room equipment, not in the more sophisticated production machinery." Meanwhile, many foreign producers actually managed to leap-frog into entirely new areas of technology.

The view that automotive imports occupied at best pockets of fringe demand and were not worthy of an all-out strategic response also appears to have dominated the domestic industry's attitudes. Certainly the bulk of all foreign cars was sold in the low-price range, with mark-ups that made them seemingly uninteresting to manufacturers as well as retailers.

The "fringe demand" view prevailed in the tire industry, too, albeit with one difference: import penetration was based on a major product innovation, the belted radial-ply tire, pioneered by Michelin, a French firm. It was higher-priced than domestic (bias-ply) tires and was regarded as a suitable replacement tire for imported cars only. As long as American firms had an exclusive hold on the domestic original-equipment market, they also expected to maintain their position in the more profitable replacement market for American-made automobiles.

Hindsight always beats foresight. The point of reviewing these perceptions is not to show how wrong decision-makers were but to suggest the prevalence of similar assessments across a range of industries. Steel, however, once again led the way

Continued on p. 6, col. 3

Table 1
Selected Industry Performance Data, 1976

INDUSTRY	*Value Of Shipments (Million $)*	*Value Added (Million $)*	*Employment*	
			Total	*Production Workers*
Motor vehicles and parts	95,381.5	30,948.4	661.8	797.1
Steel mill products	39,684.1	14,755.5	358.0	451.9
Tires & inner tubes	7,713.9	3,533.7	78.8	103.9
Metal-cutting machine tools	2,496.2	1,664.1	37.6	58.1

Source: U.S. Department of Commerce, *Annual Survey of Manufactures, Industry Profiles*, (Washington, D.C.: U.S. Government Printing Office, 1978).

Indiana's Business

An economic recession brings with it a search for its low point. Average weekly hours in manufacturing production often provide a signal of economic upturns. Historically in Indiana, three or four months after average weekly hours reaches its low point, manufacturing employment begins a turnaround even though it may have continued to fall during the intervening months.

In January of this year average weekly hours fell to 38.5, under 39.0 for only the eighth time since 1950. (See Table 1). In six of the previous seven cases, average weekly hours immediately began climbing in the following month. In all seven previous cases hours regained a 40.0 hours week level or better within the same calendar year. Table 1 shows that in each of these seven cases manufacturing employment reached its low point three or four months later. In the last two cases the lag was even shorter. In this recession, manufacturing employment has dropped steadily from 668,800 in September 1981 to 617,200 this January.

Low points of average weekly hours in the 1970s and 1980s have been accompanied by a peak in continued unemployment claims. In March 1975 continued unemployment claims peaked at 558,000 and then dropped steadily to under 200,000 by November. In February 1977, one month after average weekly hours reached a low point, claims peaked at 281,000 and then dropped back under 200,000 in two months. In July 1980, claims peaked at 513,000. Most recently, claims have climbed from 221,000 in October to 455,000 in January.

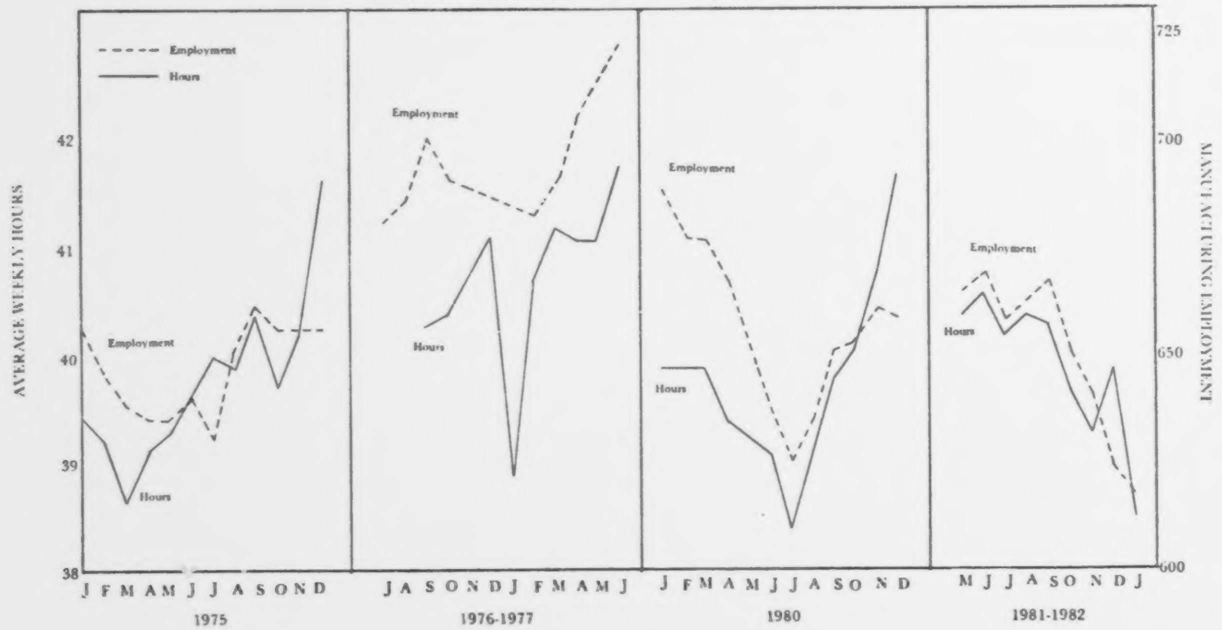
As an economic indicator, Indiana average weekly hours seem to be providing a signal consistent with the national economic forecasts that call for an upturn to commence in April or May of this year. It would be welcome news if the January figure is the low point for this recession and an upturn in employment can be anticipated in the next few months.

Frank Kushman

Table 1

Average weekly hours under 39.0	Low Point for Manufacturing Employment	Lag in Months
April 1954	August 1954	4
January 1958	May 1958	4
February 1958	May 1958	3
November 1960	March 1961	4
March 1975	July 1975	4
January 1977	February 1977	1
July 1980	July 1980	0
January 1982	?	?

WEEKLY HOURS AND MANUFACTURING EMPLOYMENT TRENDS



INDIANA INDUSTRIAL ELECTRICITY SALES
(in millions of kilowatt hours)

Reporting Cities	*Jan. 1982*	*Dec. 1981*	*Jan. 1981*	*Percent Change From Previous Month*	*Percent Change From One Year Ago*
Anderson	21.4	20.6	21.9	3.9	– 2.3
Bedford	11.5	11.0	12.3	4.5	– 6.5
Bloomington	3.9	4.3	2.8	– 9.3	39.3
Columbus	16.7	15.4	16.2	8.4	3.1
Connersville	6.1	7.5	8.6	–18.7	–29.1
Crawfordsville	10.7	10.6	9.7	0.9	10.3
East Chicago	22.9	22.7	32.6	0.9	–29.8
Elkhart	20.7	22.4	20.5	– 7.6	1.0
Evansville	38.7	41.1	41.8	– 5.8	– 7.4
Fort Wayne	40.2	39.8	41.8	1.0	– 3.8
Frankfort	7.9	8.2	7.7	– 3.7	2.6
Gary	192.3	164.0	210.7	17.3	– 8.7
Goshen	7.7	7.9	8.2	– 2.5	– 6.1
Hammond*	50.7	52.5	60.3	– 3.4	–15.9
Huntington	4.6	4.3	4.8	7.0	– 4.2
Indianapolis	319.2	320.1	331.3	– 0.3	– 3.7
Jefferson	5.5	5.9	6.3	– 6.8	–12.7
Kokomo	62.4	57.2	59.4	9.1	5.1
Lafayette	36.1	36.8	33.9	– 1.9	6.5
LaPorte	13.5	13.8	14.6	– 2.2	– 7.5
Logansport	9.9	9.5	10.5	4.2	– 5.7
Madison	2.5	2.4	2.0	4.2	25.0
Marion	25.6	25.4	26.6	0.8	– 3.8
Michigan City	42.9	42.6	43.5	0.7	– 1.4
Muncie	12.6	11.8	17.8	6.8	–29.2
New Albany	5.0	4.7	4.6	6.4	8.7
New Castle	7.2	6.4	5.6	12.5	28.6
Peru	5.0	4.9	5.6	2.0	–10.7
Richmond	23.3	22.3	24.4	4.5	– 4.5
Seymour	2.4	2.2	2.3	9.1	4.3
South Bend	22.0	28.1	22.6	–21.7	– 2.7
Terre Haute	27.2	27.4	30.0	– 0.7	– 9.3
Valparaiso	8.0	8.7	8.0	– 8.0	0.0
Vincennes	2.8	2.7	2.8	3.7	0.0
Wabash	5.6	6.3	5.1	–11.1	9.8
INDIANA	1734.8	1005.3	1877.9	72.6	– 7.6

*Continued unemployment claims of East Chicago and Hammond are combined.

Rosseger, continued

toward a more sober evaluation of developments. By the mid-sixties, the continuing growth of imports was interpreted mainly in terms of a worldwide expansion of capacity, beyond current levels of demand (AISI, 1963). The vulnerability of the U.S. industry to important competition in an ever-increasing array of products was seen as a result of (a) the ability of foreign producers to gain market share during periods of peak demand, and (b) their willingness to cling to these positions during downturns, aided by export subsidies and low U.S. tariffs. All sanguine expectations about compensating expansions of American exports had apparently been abandoned, in the face of barriers posed by low wages and protectionist policies abroad.

By the end of the 1960s, the industry had raised the steel import problem to the level of a "national concern" (AISI, 1970). By this time, even the belief in a fundamental technological superiority of American steel plants was beginning to yield to a more realistic assessment, albeit grudgingly: "The steel industry in the United States still enjoys an overall technological advantage. The margin of advantage has been shrinking steadily, however" (AISI, 1970, p. 36).

Whatever the merits of this appraisal, industry concerns were largely set aside during the steel boom of 1973-74. Indeed, market developments, together with the effects of governmental intervention, produced an optimism that was premature but perhaps not entirely unjustified. With due allowance for the occasion, the following remarks were made at an annual meeting of the American Iron and Steel Institute by an industry spokesman: "We showed the doubting Thomases back in the early sixties that the 'old giant' was far from 'finished,'—we came roaring into the seventies, rarin' to go," and " . . . in spite of disappointing earnings we found money to revitalize our companies and our industry, and today it's paying dividends" (Foy, 1975).

Let us turn to the other industries. The desperate story of automobiles needs little

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UNITED STATES-INDIANA BUSINESS INDICATORS*

(Seasonally adjusted indexes unless otherwise noted; base period: 1967 = 100)

	United States				*Indiana*			
	Latest Month		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
EMPLOYMENT								
Nonagricultural employment	Jan.	138.1	138.5	138.5	Jan.	117.0	117.2	120.7
Manufacturing employment	Jan.	100.5	101.6	103.7	Jan.	87.1	87.5	92.8
Average Weekly hours (No.)†	Jan.	36.8	39.9	39.9	Jan.	38.5	39.9	40.6
Average weekly earnings ($)†	Jan.	308.38	329.18	308.43	Jan.	374.60	384.64	369.05
Nonmanufacturing employment	Jan.	154.3	153.9	153.4	Jan.	137.4	137.7	139.8
Unemployment rate (%)	Jan.	8.5	8.8	7.4	Jan.	12.5	11.9	8.5
Unemployment-Married males (%)	Jan.	5.3	5.7	4.2	–	–	–	–
Continued unemployment claims	–	–	–	–	Jan.	371.9	513.1	318.5
PRODUCTION								
Bituminous coal production	Dec.	152.0	156.3	163.2	–	–	–	–
Industrial electricity production	Oct.	145.0	149.2	146.0	–	–	–	–
Industrial electricity sales	–	–	–	–	Jan.	154.9	89.1	165.2
Manufacturing production	Jan.	137.1	141.9	151.1	Jan.	139.2	131.9	150.5
Raw steel production	Jan.	75.4	75.6	103.2	Jan.	99.8	103.1	141.3
CONSTRUCTION								
Construction activity-total	Dec.	296.0	299.0	316.9	Jan.	169.3	169.1	224.5
Residential housing starts	Jan.	69.6	70.0	123.4	Jan.	50.4	63.2	140.0
Residential expenditures	Dec.	310.8	307.7	389.6	Jan.	192.2	193.9	297.3
Nonresidential expenditures	Dec.	288.8	294.7	281.4	Jan.	194.0	195.3	246.8
Public expenditures	Dec.	202.7	204.2	224.3	–	–	–	–
Public works and utilities	–	–	–	–	Jan.	106.3	104.8	114.0
OTHER INDICATORS								
Personal income per capita ($)[1]	Nov.	10,795.50	10,728.50	9,873.70	81:3	9.756.00	9,603.00	8.990.00
Passenger car sales (thousands)†	Jan.	535.0	523.0	648.0	Dec.	9.30	11.32	12.60
Year to date (thousands)	Jan.	535.0	8,536.0	648.0	Dec.	180.57	171.27	193.81

*Current indicators are preliminary and subject to revision

†Not seasonally adjusted

[1] Indiana's per capita personal income are quarterly data

SOURCES: Data on Indiana construction from McGraw-Hill Information Systems Company; Indiana passenger car registration from R.L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

Correction: February's IBR incorrectly reported Indiana housing starts index for December as 92.9. The correct index is 63.2.

1980 CENSUS DATA AVAILABLE

The State Data Center has received parts A and B of Summary Tape File 1. The Data Center at the State Library has printouts of all 59 tables from STF1A for the state, counties and places, as well as township data from proofs of the PHC (3) report *Summary Characteristics for Governmental Units* (Tables 1 and 2, which have broad population and housing categories). The Affiliate Data Centers around the state have, or will be receiving, state, county and place data in printout form from STF1A for their regions, as well as a copy of the PHC (3) report. We should be receiving Summary Tape File 2 (which will contain the same 100% count data as STF1, but with more detailed cross-tabulations) in late spring. Sample data (in the form of STF3) is not expected until late summer or even early fall. For further information on accessing information from the Summary Tapes, obtaining photostats from the printouts, or other services of the State Data Center, write or call:

Phone: (317) 232-3735 or (317) 232-3733

Indiana State Data Center
Indiana State Library
140 N. Senate Ave.
Indianapolis, IN 46204

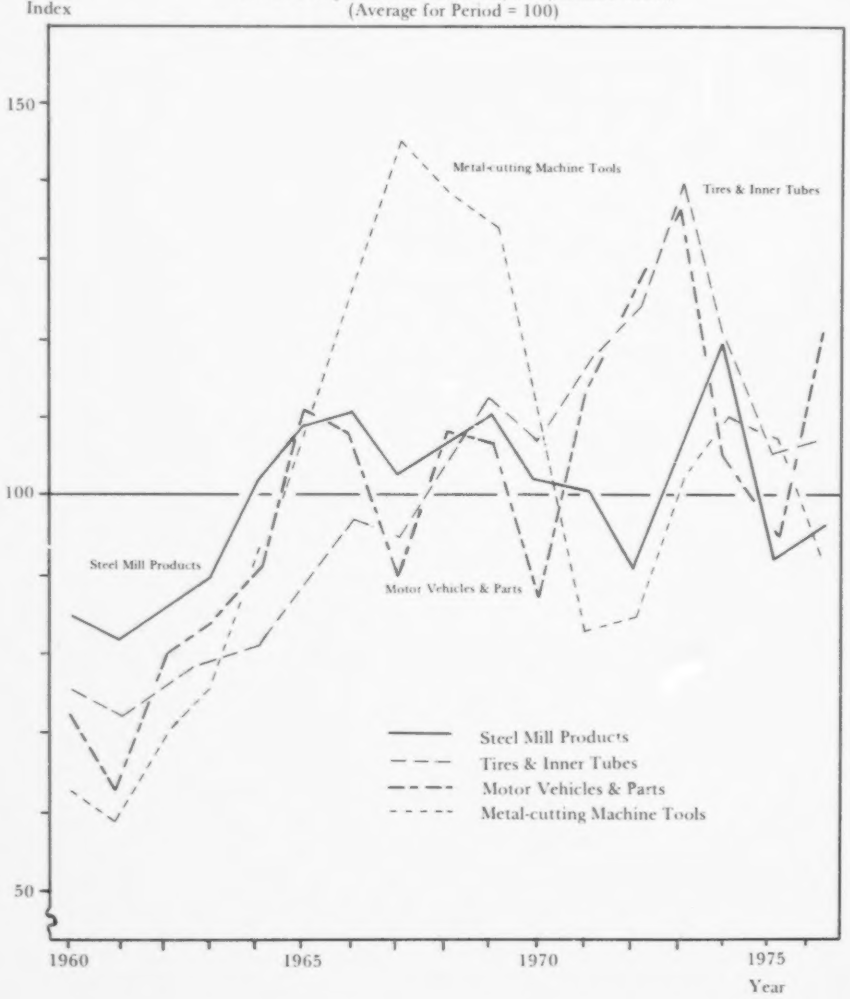
comment. The industry's basic problems have extended well into the current strategic regime, as evidenced by the following expert assessment: "I'm optimistic . . . because we're developing product lines that will soon be competitive internationally . . . Another reason I'm optimistic for the American automotive industry is that we're looking at complete obsolescence by 1985," and "I believe our basic technology is every bit as good as the foreign manufacturers' . . ." (Cole, 1980).

The machine tool industry continued to exhibit a peculiar indifference to the import threat. Perhaps the fact that decision-makers were accustomed to wide cyclical swings in business obscured the threat. Perhaps the representative (small to medium-size) firm's perspective on its particular market militated against a concern with industry-wide strategic matters. In any event, we observe continuing efforts by the head of the industry's trade association to call his widely dispersed members' attention to the growing impact of foreign competition (e.g., Gray, 1979). But this is a partial explanation, at best. The big firms also seem to have felt secure in their alleged superiority in the market for sophisticated, production-type tools, while foreign innovators had in fact extended the technological frontiers to robotization and to the development of integrated machining centers. Thus the comment by an expert: "Where (these innovations) have been carried out, the results have been startling. Unfortunately, we must look beyond our shores for the best examples." (Wisnosky, 1980).

The awakening of the tire industry occured, in rude fashion, in the early 1970s. It came when the Ford Motor Company announced its decision to put the '71 Lincoln Continental on radial tires (supplied by Michelin) and then committed itself to radials for most of its '74 model line. General Motors followed suit. From satisfying a "fringe demand" in the replacement market, foreign manufacturers had moved into the supposedly unassailable original-equipment business. The pioneer, Michelin, established production facilities in the United States, a development met with a somewhat puzzling statement by the president of one of the large domestic tire makers. He welcomed the direct foreign investment, because " . . . that should ease the import threat" *(Industry Week*, 1973). However, in an interview the chief executive of another firm conceded, "I guess we sat on our hands too long."

All in all, it seems fair to conclude that the steel industry was well ahead of the others in recognizing the full impact of import competition and in overcoming the myth of American technological superiority. The collapse of that myth probably had the useful effect of focusing industry

Figure 2
Value of Shipments, In Constant (1967) Dollars Index,
(Average for Period = 100)



attention on alternatives to the (narrowly defined) "best-practice" approach to competitive upgrading. For as Hans Mueller (1980) has correctly suggested, the potential benefits of that approach can be overplayed. Our own empirical analyses (Gold *et al.*, 1980) lend support to this suggestion.

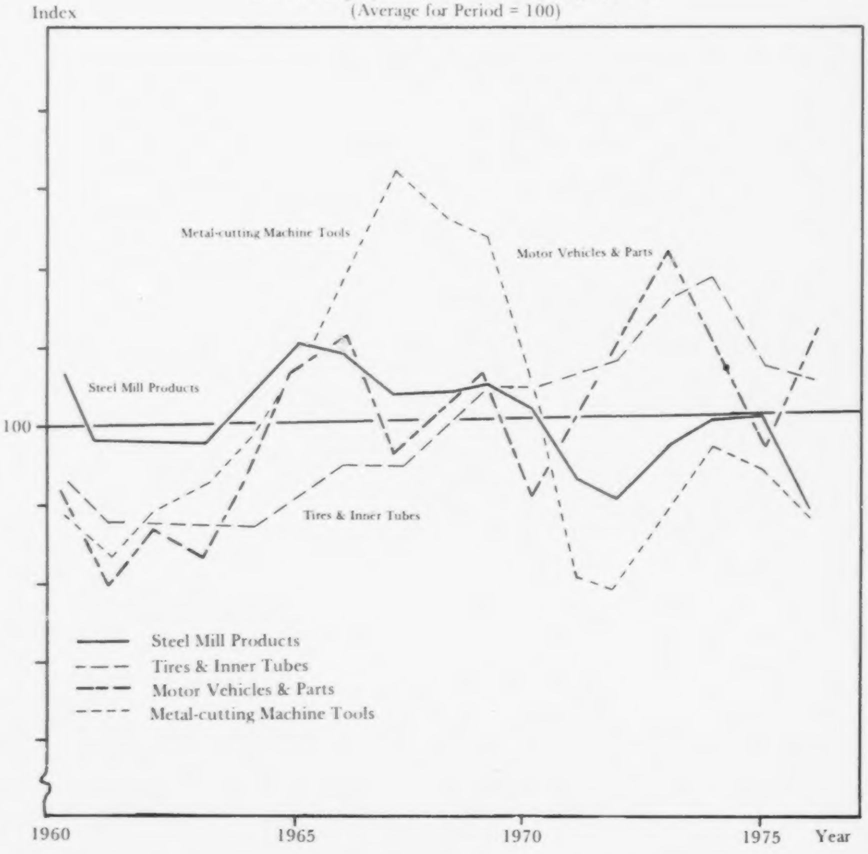
PATTERNS OF STRATEGIC RESPONSE

A detailed review of corporate strategies, as identified in our case studies, would go well beyond the scope of this paper. Therefore, I shall restrict myself to some observations on three general areas—technological innovation, capital formation, and structural change, and to a few comments on apparent obstacles to the development of effective strategies.

The steel industry's receptiveness to technological opportunities has been the subject of a vast literature. Economic analysts wax ecstatic over the chance to measure diffusion rates, to compare vintage structures, and to correlate cost competitiveness with the adoption of individual innovations. It would appear that, by now, three lessons should have emerged from these studies: (a) The piecemeal introduction of even major process innovations into existing production systems rarely brings the cost benefits claimed for such innovations *in abstracto;* (b) there is little apparent correlation between "innovativeness," however measured, and a firm's profitability; and (c) no general, industry-wide expectations about the effects of innovations on competitiveness can be formed, without attention to the specific structure, product mix, and markets of individual firms. It is a fact that capital shortages and other constraints have often forced firms into "making do" with existing facilities and to look elsewhere for improvements in productivity and profitability, and that many of them have done quite well on this less spectacular and less easily measurable path. To observe this is not to deny the importance of technological "up-to-dateness," but to suggest that innovativeness *per se* is not a nostrum that assures competitiveness (Gold *et al.*, 1980).

The speed (or tardiness) of an industry in meeting foreign competition is more easily judged in situations involving more or less straightforward product innovations. Thus, the tire industry's efforts to convert to radial tire production in the early seventies reflect a frantic catching-up with changed market demand. The story of the change-over, which required entirely new process equipment and operating practices, is complex and involved a number of false starts and technological dead ends. The following figures illustrate the magnitude of the adaptation: In 1971, radial tires accounted for 5 percent of the original-equipment market; by 1979, they had a 77 percent share. In the replacement market, the share of radials increased from 20 to 47 percent over the same period (Standard & Poor, 1980). The effects of this

Figure 3
Index of Employment, Selected Industries, 1961–76
(Average for Period = 100)



technological bootstrap operation on the industry are in sharp contrast to steel: large chunks of traditional capacity became obsolete, and the tire makers' return on investment dropped by more than 70 percent over the years of change-over.

In the case of metal-cutting machine tools, rising imports provoked nothing like this kind of massive response. In fact, sales of foreign-made, advanced machine tools grew steadily and increasing numbers of foreign firms began to establish assembly and manufacturing facilities in the United States. There are some notable exceptions, of course, but the comments of one foreign supplier are indicative of the situation: "We put a lot of emphasis on our more sophisticated machines, because we really have little if any competition from domestic suppliers" (*Iron Age*, 1979). Meanwhile, such countries as Korea, Taiwan and India have become exporters of simple, standard machine tools.

It does not seem unfair to judge that the industry finds itself roughly in the position steel confronted in the mid-sixties; however, there are few signs of a concerted effort to fight back. Whatever technological advantages American manufacturers may have enjoyed continue to be eroded (Department of Commerce, 1979, p. 236). Given the fact that the typical firm does not have the resources to engage in extensive R&D efforts, one might expect that cooperation with foreign producers provides an alternative strategy. But little of that has occured, and perhaps the spokesman for a Japanese company explains why: "We did consider establishing licensing arrangements with a U.S. builder but we weren't able to come to anything satisfactory. The U.S. machine tool builders are too shortsighted and too profit conscious" (*Iron Age*, 1979).

The steel industry has made the need for continuing injections of large amounts of capital the linchpin in its pleas for protection and for the reform of tax policies. Therefore it is interesting to check how its past rate of investment compares with that of the other industries which have had to play catch-up to foreign competition. Figure 4 shows annual capital expenditures as percentages of sales for our sample industries. It will be seen that steel led the group for most of the period, being surpassed only by the tire industry during the latter's "crash program" of the early seventies. The motor vehicle and machine tool branches ranked well below these two throughout these years.

This sanguine observation about steel's (relative) leadership in investment must, of course, be tempered by two considerations. First, we know that substantial portions of capital expenditures did nothing to enhance productivity, profitability, or competitiveness but went to environmental control facilities. Second, we do not know with any accuracy how much of firms' cash flow from steel operations was invested elsewhere, in pursuit of a strategy of diversification into non-steel activities.

Such fundamental structural changes in import-competing industries are only partly the result of deliberate decisions by existing firms. Perhaps the most interesting fact about steel is that a period in which large, integrated firms tried to shrink themselves into better health by shutting down marginal plants and abandoning marginal product lines, also saw the entry of many new firms, the mini-mills, into a depressed market. Explanations for this development must be sought primarily in geographic and product-specific factors; nevertheless, it suggests that there was room for aggressive domestic competitors even at a time when growing imports seemed to offer little in the way of incentives for entry.

The changes which resulted from the tire industry's response to import competition can be best summarized by the observation that as of 1980 no more passenger-car tires were being manufactured in the historical "tire capital," Akron. Shrinkages of operational (as against book) capacity were accompanied by massive relocations of plants. The age and layout of existing facilities, as well as a desire to get away from restrictive union work rules, explain this strategy. While the large firms struggled to adjust themselves to a rapidly changing market, several of the smaller ones fell into serious difficulties, with at least one bankruptcy reported. In addition to the wholesale renewal of passenger-tire capacity, the "Big Five" also moved toward increasing diversification. By 1978, only Goodyear derived more than 80 percent of its income from tire sales, whereas the others derived less than 50 percent of their revenues from tires.

An assessment of structural changes in the metal-cutting tool industry is difficult because of a lack of up-to-date statistics. We do know, however, that there has taken place a shrinkage in the number of establishments from their 1967 peak of over 900; more significantly, those with 20 or more employees declined from 338 in 1967 to 275 in 1972 (MTBA, 1979). Total industry capacity has been shrinking steadily since the 1950s. Turnover of small firms is quite rapid, and so the above figures are only suggestive of changed market conditions. As indicated earlier, the most significant structural changes may be expected to result from growing direct foreign investment in the United States. Overseas manufacturers find cost conditions reasonably attractive and have an incentive for locating production close to their customers, in order to meet specific requirements for technologically advanced equipment.

I have attempted elsewhere (Rosegger, 1981) to sort out how much the economic and political environment contributed to these generally discouraging developments, in addition to the affected firms' own strategies. Here I want to make just two observations. The first has to do with the growing obstacles to technological effort and new investment. Among these one could list the role of labor unions, the increasing uncertainty surrounding the cost and completion time of major capital projections, the strictures imposed on inter-firm cooperation by antitrust rules, and the prospect that, whatever efforts American industries make, foreign governments will enable their key industries to compete in the United States, in the interests of maintaining politically desirable levels of employment. My second observation concerns the much-lamented influence of capital market attitudes on the strategic decisions of firms: to the extent that near-term return on investment is stressed as *the* criterion for the allocation of scarce funds, decision-makers will have a strong incentive to prefer technological tinkering and incremental projects to major undertakings. Further, to the extent that governmental policies—or uncertainty about the direction of future policies—increase the tendency of managements to look no further than to the next annual report, we would expect basic innovations to remain on the back burner until their adoption becomes a purely defensive measure and not a means of getting a competitive edge in domestic and foreign markets.

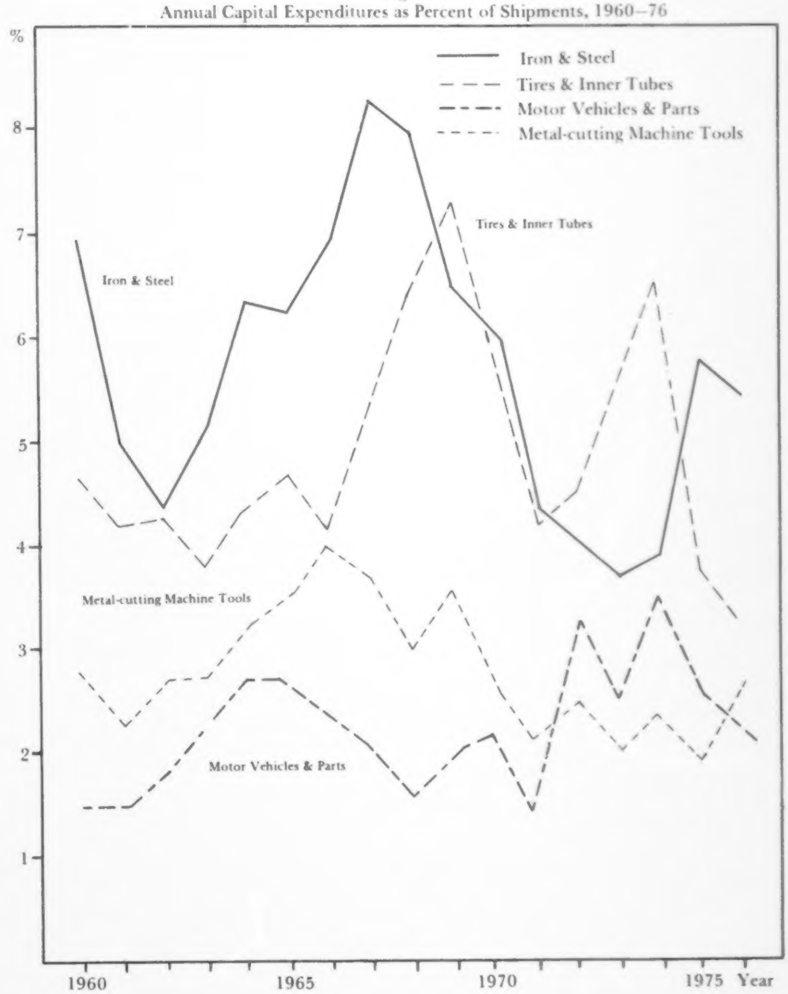
SOME CONCLUDING OBSERVATIONS

Our brief comparison of steel with three other import-competing industries hardly permits any sweeping generalizations. However, since steel decision-makers so frequently have been berated for their failure to respond aggressively to import competition and for their alleged laggardness in technological innovation, our case studies at least permit us to redress the balance: the industry surely did no worse, and probably did a lot better, than the other three sectors in the timely recognition of a market threat and in the development of appropriate strategies. That these strategies included pleas for assistance from Washington is hardly surprising.

Despite a number of handicaps, some external and some self-imposed, the industry appears to have weathered the previous strategic regime's storms in better fashion than the other sectors in our sample. Setting to one side such imponderables as foreign government policies and exchange-rate developments, we may expect that the industry's integrated firms (and certainly the mini-mills) will be able to hold their own against foreign competitors, at least in certain markets and certain product lines. Whether steel will be able to capitalize on its relative strengths and improve its position, remains to be seen. Even such a cautious assessment is more than one would have dared make ten or fifteen years ago.

This paper is a byproduct of a broader investigation of the role of technological changes in the competitiveness of several U.S. Industries, conducted under the leadership of Professor Bela Gold, Director, Research Program in Industrial Economics. Part of the work was supported by a grant

Figure 4
Annual Capital Expenditures as Percent of Shipments, 1960–76



from the National Science Foundation; however, the findings and opinions presented do not necessarily reflect the views of the Foundation. An earlier version of the paper was presented at the Twelfth Atlantic Economics Conference, New York City, October 8-11, 1981.

[1] In identifying these phases, we have relied heavily on published statements and interviews. This approach raises the question whether spokesmen really believed what they said. Our skepticism is allayed only by the fact that, in general, the historical evidence suggests that they also acted as though they believed it.

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Indiana Business Review

Volume 57 April, 1982

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Reindustrialization of the Steel Industry in Northwest Indiana

In this issue ▪ ▪ ▪

Last month this *Review* carried an analysis of the challenge of imports to the steel industry. This issue continues with three additional articles secured by Professor Larry Davis of Indiana University-Northwest for the IBR. Professor Davis himself offers an examination of the issues facing steel in the U.S. A perspective from the industry is offered by Lon Doty and an analysis of the role of steel in Northwest Indiana is detailed by Professor Leslie Singer of Indiana University-Northwest.

Two articles appear in Indiana's Business, our section on the state economy. Frank Kushman traces the current (or recently concluded) recession in manufacturing. He demonstrates the strong differential impact on Indiana's manufacturing industries. Joel Webster offers a longer view which places the current recession in perspective. He shows the diversity of manufacturing performance within the state. Reading all these articles together, one can see the overall impact steel has on the state's aggregate condition.

Morton J. Marcus,
Editor

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D. LARRY DAVIS

Associate Professor of Economics, Indiana University-Northwest

U.S. steelmaking is in a slow growth period faced with severe foreign competition, and the reindustrialization programs of the Reagan Administration should be beneficial for the steel industry. In particular, survival of the U.S. steel industry can best be served by continual retrenching toward the Great Lakes. Thus, the reindustrialization program of the current Administration should have a beneficial impact on the economy of the Northwest Indiana.

Historically, my assessment is that the steel industry is a declining industry in the Northwest Indiana economy. The 1973-75 recession marked the turning period for the industry (see Davis).[1] Robert Crandall and others[2] tend to agree with this assessment and mark the year 1977 as the major turning point for the U.S. steel industry (see Crandall).[3]

In the period from 1978-79 the steel industry reduced its capacity by more than 5 percent, or 8.5 million tons. Future reductions may be another 17 million tons (see Crandall).

The reaction of the declining industry and its resulting impact on the economy, especially in the Northwest Indiana area, has been to adopt the essential ingredients of the Solomon plan. The Solomon plan was developed by Anthony Solomon, U.S. Secretary of the Treasury for Monetary Affairs during the 1969-1974 period. The plan was adopted by the Carter Administration and carried through by the Reagan Administration. It established trigger-pricing based on the cost of production in the world's most efficient steel industry, Japan.

In the world economies the response was echoed in the Davignon plan. The Davignon plan is a European plan that began during the 1977-78 crisis. It provides for import reference prices, domestic guidance prices, and phased reductions of steel making capacity in European markets. It sharply reduces Japan's exports to the European community and restrains selling to the U.S. market.

Each of these plans was designed to assist the U.S. steel industry in becoming more competitive, to slow the decline of U.S. steel industry employment, and to maintain international stability in the world steel markets.

The implementation of the Solomon plan is referred to as the "Reindustrialization of the Steel Industry" in this article. The essence of this plan is that capital formation, employment stability, and potential growth may be generated with investment incentives and trade protection. Both policies, adopted by the Carter and Reagan Administrations, are designed to support the declining steel industry. Competitive advantage to the steel industry can be increased by reinforcing regional comparative advantages and advantages of scale economies which exist in the Great Lakes region. These policies should benefit the Northwest Indiana economy in the short run and in the long run as we move from the contraction phase of this current recession. The recovery, however, is likely to be relatively slow and employment recalls will not be for all workers previously laid-off.

Ultimately, the survival of the steel industry means retrenching, with capital formation, and strong incentives to improve productivity of the steel workers in the Great Lakes region.

My view is cautiously optimistic that the steel industry will survive the very treacherous period of the 1980s, and survival will occur only as labor, management, and government work cooperatively to face the reality of the noncompetitive steel producing of the U.S. industry. The industry must be able to find ways to avoid noncompetitive legislation to protect the industry, such as the "triggering mechanism." The ultimate survival of the U.S. steel industry is dependent on long-run mechanisms to increase the efficiency of the industry and make the product price-competitive.

Policies such as the continued use of the Steel Committee within the Organiza-

Continued on page 9, col. 1

Industry's View: Reindustrialization of Indiana's Steel Industry

LON DOTY

Former Vice President and General Manager, Midwest Steel, now Executive Vice President of National Pipe and Tube Company

The Calumet region of Northern Indiana consisting of Lake and Porter Counties produces approximately 17 percent of the nation's steel output. Five major steel corporations have mills in this area. They are; Inland Steel–East Chicago, Jones & Laughlin–Indiana Harbor, United States Steel–Gary, Bethlehem Steel–Burns Harbor, and National Steel's Midwest Division–Portage.

There has been a significant decline in the number of steelworkers employed over the last ten years. It is estimated that 15,000 jobs have been lost in this area in that time period, most of them in the steel industry. With current unemployment levels at 14.8 percent our area exceeds both the state average of 13.6 percent and the national average of 9.4 percent. Despite the alarming statistics, I do not believe the trend is indicative of the future health of the steel industry in Indiana. I would like to discuss some of the steel industry's assets and liabilities in this region, and what help can be expected from President Reagan's reindustrialization program.

All steel companies in the United States are in general agreement that there are three areas in which the federal Administration must provide assistance if the industry is to regain a dominant position in both the domestic and the international market. Those areas are capital formation, imports, and regulations.

CAPITAL FORMATION

According to the American Iron and Steel Institute, the average age of steelmaking facilities in Japan is 11 years versus 17.5 years in the United States, with at least one-fifth of our capacity over 25 years old. The Bethlehem–Burns Harbor and the National Steel–Midwest mills are among the newest greenfield site mills in the United States, although Midwest began operations in 1961 and Burns Harbor in 1965. Hundreds of millions of dollars have been spent or committed by the mills in Indiana, but too little has been available for productivity improvements. On the other hand, Japan has had massive infusions of money dedicated to the modernization of their mills.

Blast furnace rebuilds, new coke ovens, continuous casters, cold roll continuous annealing lines and revisions to galvanize lines costing hundreds of millions of dollars are some of the capital projects under construction or planned for the Calumet region. Unfortunately, these improvements are only a start because virtually all the mills have operating units which modern technology has left inefficient and outdated. If we are to compete effectively in the international marketplace, we must accelerate the rate at which this equipment is replaced. In 1980 the American steel industry had a net income as a percent of sales of 3 percent and a net income as a percent of investment of 8 percent. These returns are totally inadequate to sustain a competitive industry in the world market. The major stumbling block to the revitalization of our industry–raising capital through increased profitability–can be overcome through more rapid depreciation schedules and tax incentives designed to spur investment.

Under existing tax laws the U.S. depreciation policy requires 12 or more years to write off the original cost of a new plant and equipment. Compare this to Canada, our neighbor and competitor, which requires a 2½ year write-off. New capital recovery policies need to be written into our tax laws which abandon the asset depreciation range (ADR) system and provide instead a shorter depreciation period. The Accelerated Capital Recovery System (ACRS) proposed by the President and adopted by Congress promises significant long range advantages to industry.

IMPORTS

Part of the decline of the American steel industry can be attributed to steel imports. The market share of imported steel in the United States in 1950 was 2.5 percent of consumption. In the 1960s the import market share climbed to 10.2 percent and in the 1970s, 15.5 percent. In 1980 we imported 15.5 million tons while consuming a ten year low of 101.3 million tons of raw steel. Imports in 1981 should reach at least 19.5 million tons. Approximately 22 percent of this imported steel comes into the Great Lakes area and has a direct effect on the Calumet area mills. Much of this steel has been sold in this country at less than the cost to produce it and as such, falls into the area of American anti-subsidy and anti-dumping laws. Unfortunately, the enforcement of these laws has been lax and too often domestic steel producers have been victimized by governmental representatives making trade and economic concessions for political and military expediency. The Carter Administration enacted the Trigger Pricing Mechanism (TPM) in an effort to halt the dumping of steel products in this country. In retrospect, however, TPM has proved to be inadequate due to loopholes and spotty enforcement.

I believe in free trade and am opposed to any kind of punitive or restrictive tariffs. Neither do I want to see subsidies or other forms of direct assistance from the government to industry as so many of our foreign competition have implemented. The help our industry needs is for the strict enforcement of the law and the opportunity to compete with foreign steelmakers using the same basic ground rules.

The Trigger Pricing Mechanism has been strengthened and reinstituted by the current Administration, along with the promise of stricter enforcement.

REGULATIONS

As more and more people became aware of hazardous pollutants in the air and water, pressure was exerted on Congress to pass the Clean Air Act of 1970 and the Federal Water Pollution Control Act of 1972. Automobiles, airplanes, industrial plants, inadequate sewage treatment plants, agricultural run-off, street and parking lot run-off, and many other areas contributed to the degradation of the environment. Steel mills with their open hearths, coke ovens and coal piles were highly visible targets. Following passage of the laws, a bureaucracy developed very quickly in the Environmental Protection Agency which I believe interpreted the law far beyond the original intent of Congress. Many of these interpretations led to severe economic restrictions on industry, resulting in some plant shutdowns and layoffs.

The American Iron and Steel Institute commissioned Authur D. Little, Inc. to obtain objective industry-wide data and analyses on the performance of the U.S. steel industry in meeting regulations imposed through the Clean Air Act of 1970 and the Federal Water Pollution Control Act of 1972, and the 1979 amendments to both these laws. In addition, the study assessed the overall economic consequences of meeting these regulations in the future.

The steel industry in the United States has spent $8.5 billion on the various environmental compliance programs and will spend another $7.7 billion by 1990 unless some relaxation of current requirements is permitted.

I recognize and endorse the need to continue strides made in our industry toward the two basic objectives contained in the Clear Air and Clean Water Acts. The primary air quality standards call for control of certain criteria pollutants and any additional hazardous pollutants which may have an adverse effect on public health. The Clean Water Act's first objective is directed towards certain specific pollutants.

The area steel mills have shown remarkable improvement in pollution levels in the last ten years; in fact, some mills now are, or soon will be, in total compliance with the primary air and water standards. We are urging the Administration to restudy the need for the secondary objectives. In the Clean Air Act the secondary objective concerns the attainment of air quality standards to protect the public welfare. These standards are not necessary to protect the public health. The Clean Water Act calls for a secondary objective to eliminate all effluents—in other words "zero discharge." Since it is estimated the steel industry is now approximately 95 percent in compliance, with Indiana mills probably higher, it is appropriate to ask that more decisions be made on the basis of the cost versus the benefits to be attained.

The Administration has declared its intention to relax regulatory overkill. The work underway to take a common sense approach to OSHA and EPA is encouraging. Energy costs in our area are significantly higher than other sections of Indiana and most of the nation. Northern Indiana Public Service Company, which serves this district with electric power, is 95 percent coal fired generation, of which 50 percent is transported by diesel powered unit train from coal fields in Wyoming. Indiana has coal reserves of 17 billion tons, most of which is not available to the mills or utilities due to environmental restrictions. A relaxation of the sulphur dioxide standards or new technology for its removal is needed to permit the use of Indiana coal. Current practice calls for the use of scrubbers to lower the SO_2 content of coal, but the scrubbers are heavy energy consumers and the process leaves a sludge residue. The residue is then deposited in landfills which are becoming increasingly difficult to locate.

Relief in this area would not only reduce the cost of energy to the general public, but also to the coal and electricity consuming mills and add to the attraction of the area for other industries seeking building sites.

SUMMARY

Although it is far too early to assess the benefits of President Reagan's reindustrialization program on the steel mills of Northwest Indiana, it is apparent that the administration and Congress realize the necessity for action to help make the industry more competitive.

With the industry section of the tax bill passed last year, stronger enforcement of anti-dumping laws and a practical examination of environmental regulations from a cost/benefit standpoint are all tangible evidence that the President's promises were not just campaign oratory. He realizes the need for industry to earn a reasonable profit in order to generate the funds needed for research and development of new processes and plant modernization and expansion.

The mills of the five major steel corporations in Lake and Porter counties are the most modern steel producing units in the United States. These mills are in close proximity to the major steel consuming market in this country and are served by adequate rail, truck and water transportation. The mills are strategically located to receive the raw materials which go into the making of iron and steel and there is an adequate supply of labor available to man the various steel processing units. Within easy driving distance are many attractive home sites which, coupled with the recreational potential of Lake Michigan, enhance the quality of life in this area. The many cultural pursuits of northern Indiana and Chicago and the educational opportunities of the many colleges and universities all combine to make Lake and Porter counties attractive areas within which to work and live.

The benefits which are expected from the various government activities unquestionably will be very helpful but they alone will not make the American steel industry the low cost producer in the world. The industry recognizes the need for greater productivity, better quality and more worker involvement. Teams are being set up in various area mills which dedicate themselves to the attainment of these objectives.

We need to reexamine the way in which we manage our businesses; our organization and structures; the climate we create within the mills. Changes must be made where traditional views are no longer appropriate.

Despite the staggering costs associated with updating our industry, I believe the

Continued on page 9, col. 3

Indiana's Business

THE TRAUMA IN MANUFACTURING

The evidence is now clear that Indiana was hit harder and hit earlier by the recession of 1979-82 than was the nation as a whole. This past January, manufacturing manhours in Indiana reached the lowest level since July 1961. The nation has receded only to the July 1975 level. February data show improvement from January's lows, but these data are not seasonally adjusted (see man-hours table on p. 6). January's cold weather would lower its figures and make the February rebound appear stronger than reality would warrant.

Following the recession of 1975 both Indiana and the United States reached a peak in manufacturing manhours in December 1978. Since then both have had a dominant downward trend. This past January the number of manhours in Indiana was 26 percent below its December 1978 peak whereas the number of manhours in the nation was down by only 16.9 percent.

Figure 1 shows the data for both Indiana and the United States as a percent of December 1978. The brief recovery of 1980 and the stagnation of early 1981 are clearly evident.

Data for individual industries indicate that the slide for Indiana began in many instances before the national decline. Primary metals and electrical machinery in Indiana began declining a full two years before their national counterparts (see Table 1). These two Indiana industries were among seven in which Indiana's slide preceded the nation. Five Indiana industries began their declines at the same time as the nation and only three lagged the nation.

Not only did declines begin earlier in many of Indiana's manufacturing industries, but in 13 of the 15 these declines were also more severe. Hardest hit in Indiana has been the transportation equipment industry and the lumber and wood industry. Both have shrunk by more than 40 percent since their peak.

Not all Indiana industries fit this pattern of earlier and steeper declines. In particular, the chemical industry in Indiana did not peak until August 1981, twenty-six months after the national chemical industry peaked. The decline in manhours in the state's chemical industry has not been as severe as in the nation either, down only 4 percent compared to 5.5 percent for the nation.

The fabricated metals industry in both the nation and the state began declining in December 1978. This Indiana industry bottomed out in July 1980 while nationally the decline continued through January

Table 1

		Post 1975 Peak	*Trough*	*Percentage Change Peak to Trough*
Total Manufacturing	Indiana	12/78	1/82	−26.0
	United States	*12/78*	*1/82*	*−16.9*
Food	Indiana	9/76	2/81	−22.4
	United States	*9/79*	*1/82*	*−16.5*
Rubber	Indiana	1/79	1/82	−34.9
	United States	*12/78*	*7/80*	*−19.9*
Stone, Clay, Glass	Indiana	6/78	1/82	−35.5
	United States	*6/79*	*1/82*	*−28.4*
Primary Metals	Indiana	4/79	12/81	−27.1
	United States	*6/79*	*1/82*	*−25.2*
Fabricated Metals	Indiana	12/78	7/80	−33.2
	United States	*12/78*	*1/82*	*−21.8*
Non-Electrical Machinery	Indiana	12/78	1/82	−24.4
	United States	*12/78*	*1/82*	*− 9.2*
Electrical Machinery	Indiana	9/77	1/82	−27.1
	United States	*12/79*	*7/80*	*−11.8*
Transportation Equipment	Indiana	12/78	1/82	−43.2
	United States	*12/78*	*1/82*	*−29.6*
Chemicals	Indiana	8/81	1/82	− 4.9
	United States	*6/79*	*1/82*	*− 5.5*
Furniture	Indiana	6/78	2/82	−30.8
	United States	*12/78*	*1/82*	*−25.6*
Textiles	Indiana	10/77	1/82	−31.5
	United States	*6/78*	*1/82*	*−25.6*
Lumber and Wood	Indiana	6/79	1/82	−42.1
	United States	*6/79*	*1/82*	*−36.5*
Paper	Indiana	6/78	2/82	−20.9
	United States	*6/78*	*1/82*	*−10.0*
Printing	Indiana	7/79	2/82	−19.2
	United States	*12/81*	*1/82*	*− 5.2*
Petroleum Refining	Indiana	10/80	2/82	−26.4
	United States	*9/79*	*3/80*	*−37.1*

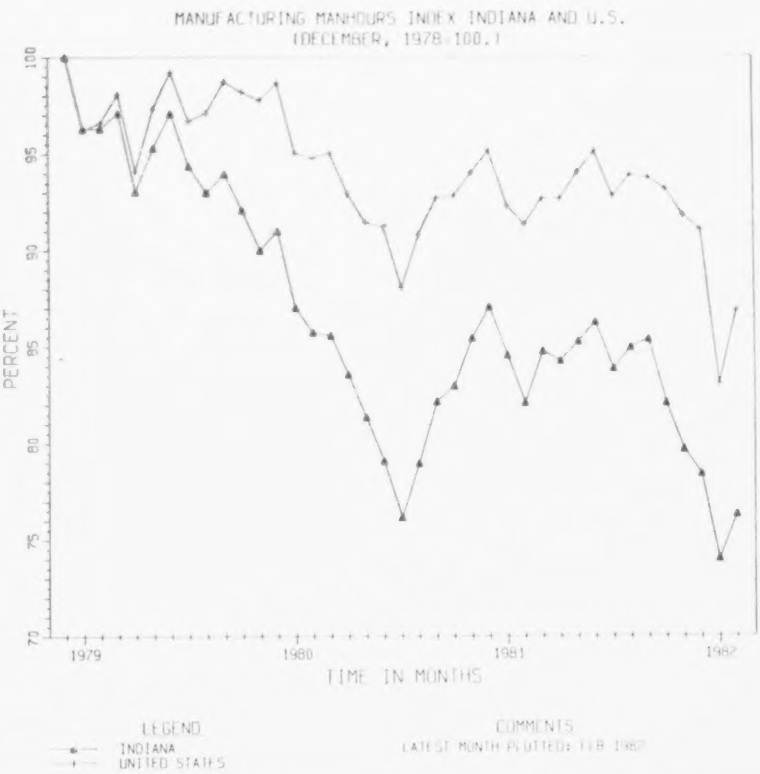
of this year. Even though the decline in Indiana was six months shorter than the nation's, it was considerably more severe, dropping 33.2 percent compared to only 21.8 percent.

It should be noted that in the four industries shown in Table 1, February 1982 is shown as the trough. It is possible that when later data become available we shall find that February is only an intermediate position on the way towards a later low.

The question before business analysts at this time is whether the Indiana recovery will be as dramatic as its decline and whether that recovery will be coincident with the national turnaround. In the preceding recessions (1974-75) Indiana lagged the nation during the early recovery stage. The progress of this recovery is likely to depend on consumer durable sales in the coming months.

Frank K. Kushman

FIGURE 1



MAN-HOURS IN INDUSTRIAL PRODUCTION
(Seasonally adjusted data)

	United States				*Indiana*			
	Latest Month **(millions)**		*Percent Change From* *One Month Ago*	*One Year Ago*	*Latest Month* **(thousands)**		*Percent Change From* *One Month Ago*	*One Year Ago*
Manufacturing	**Feb.**	**766.3**	**4.4**	**– 5.2**	**Feb.**	**25,850.0**	**3.6**	**– 7.0**
Food	Feb.	63.7	0.2	– 2.9	Feb.	1,451.9	0.2	3.1
Apparel and textiles	Feb.	76.3	17.6	– 8.0	Feb.	368.6	0.3	– 5.9
Lumber and wood	Feb.	24.3	12.1	– 7.3	Feb.	590.9	6.4	–13.3
Furniture	Feb.	17.2	10.5	– 5.5	Feb.	661.2	–4.0	–11.6
Paper	Feb.	29.5	– 1.0	– 3.1	Feb.	525.4	–1.7	–11.7
Printing	Feb.	50.7	0.5	7.1	Feb.	1,065.1	–2.8	– 6.0
Chemicals	Feb.	45.1	– 1.0	– 2.0	Feb.	1,364.4	4.9	1.8
Petroleum and products	Feb.	8.4	– 3.5	– 4.9	Feb.	174.9	–2.8	–14.9
Rubber and plastics	Feb.	28.2	2.4	– 5.0	Feb.	1,157.7	9.5	– 6.5
Stone, clay and glass	Feb.	22.9	2.2	– 8.7	Feb.	799.0	2.6	– 7.7
Primary metals	Feb.	40.7	0.9	–13.2	Feb.	3,990.0	5.1	–15.0
Fabricated metals	Feb.	59.2	3.0	–12.2	Feb.	2,214.0	1.4	– 5.9
Nonelectrical machinery	Feb.	106.4	4.7	– 2.7	Feb.	2,869.0	–0.9	– 4.7
Electrical machinery	Feb.	82.5	3.1	– 1.6	Feb.	3,789.8	–1.7	– 8.0
Transport equipment	Feb.	68.5	3.2	–12.7	Feb.	2,918.3	2.3	– 7.6

THE VALUE OF A DOLLAR IN WAGES

For both the U.S. and Indiana, the period from 1968 to 1978 saw an increase in the value added by manufacture per dollar paid in wages to production workers. The value added by manufacture is defined as the dollar difference between the products shipped from that area and the cost of the materials shipped to that area (adjusted for change in inventory). When this value is divided by the dollars spent in wages to production workers, it yields a ratio which defines the increase in value generated per dollar spent on wages of production workers. In 1968, the national value to wage ratio was 3.25. That is, there was an increase in value by manufacture of $3.25 for every dollar spent in wages to production workers. In 1978, the increase in value was $3.75 for every dollar paid in wages. This constituted a 15 percent increase in the value added per wage dollar. In Indiana, by contrast, this increase was only 6 percent. In 1968, Indiana generated a $3.04 increase for every dollar in wages, while in 1978 this increase was $3.22.

There are dramatic differences between the performance shown by the 24 largest industrial counties of Indiana. In 1968, six of these counties (Bartholomew, Clark, Monroe, Porter, Tippecanoe and Vigo) added more value per wage dollar than the national average. Furthermore, five of these counties (all except Clark) improved this value at a faster rate than the nation for the period from 1968 to 1978. That is, they not only showed superior performance in 1968, but extended this advantage further in the succeeding decade.

By 1978, Monroe County (the highest) added value of $5.54 per dollar in wages paid to production workers, 48 percent better than the national average. Two other counties, Porter and Tippecanoe, increased their value added per wage dollar at more than twice the national rate.

In contrast, five other counties not only added less value per wage dollar than the U.S. in 1968 but had an even lower ratio in 1978 (Delaware, Fayette, Grant, Howard and Lake).

What are the possible causes of such differences? It could be due to differential increases in wages or to differential increases in the value added by manufacture. The effective hourly wages paid to produc-

VALUE ADDED BY MANUFACTURE PER DOLLAR WAGE
OF PRODUCTION WORKER:
LARGE INDUSTRIAL COUNTIES

Area	*1968*	*Rank*	*1978*	*Rank*	*% Change*	*Rank*
United States	3.25		3.75		+15	
Indiana	3.04		3.22		+ 6	
Allen	2.92	12	4.06	6	+39	3
Bartholomew	3.61	4	4.29	3	+19	8
Clark	5.48	1	4.27	4	−22	24
Delaware	2.66	17	2.64	19	− 1	17
Dubois	2.42	24	2.62	20	+ 8	11
Elkhart	3.50	5	3.64	11	+ 4	16
Fayette	2.58	20	2.53	22	− 2	19
Grant	3.07	10	2.70	18	−12	21
Henry	2.50	22	2.05	24	−18	23
Howard	2.65	18	2.59	21	− 2	19
Kosciusko	3.43	6	3.70	9	+ 8	11
Lake	2.81	13	2.44	23	−13	22
La Porte	2.80	14	3.58	12	+28	5
Madison	2.63	19	2.78	17	+ 5	15
Marion	3.07	10	3.32	13	+ 8	11
Monroe	4.35	2	5.54	1	+27	6
Noble	2.50	22	3.69	10	+48	2
Porter	3.18	8	4.23	5	+33	4
St. Joseph	2.75	15	3.18	14	+16	10
Tippecanoe	3.18	8	4.87	2	+53	1
Vanderburgh	3.79	3	3.77	8	− 1	17
Vigo	3.22	7	3.92	7	+22	7
Wabash	2.54	21	2.95	15	+17	9
Wayne	2.73	16	2.94	16	+ 7	14
Rest of Indiana	3.04		3.37		+11	

Source: 1968 and 1978 Annual Survey of Manufacturers tion workers in the five poorly performing counties increased by 139 percent between 1968 and 1978. However, the effective hourly wages in the five counties with strong performance rose by 141 percent during the same period. Therefore the difference in performance does not appear to be due to wages but must be entirely due to differences in the value added. During the decade 1968-1978 the value added by manufacture increased by 97 percent in the poorly performing counties but increased by 241 percent in the strongly performing counties.

Although data are not available at the county level, in many cases, indications regarding causes can be drawn by looking at new capital expenditures for the state and comparing it to the nation. In 1968, for the U.S., 7.23 percent of the value added by manufacture was reinvested in new capital expenditure. In the same year, new capital expenditure in Indiana was 8.40 percent of the value added by manufacture. This presumably reflects the different mix of industries, with Indiana having a concentration in the capital-intensive durable goods manufacturing sector. In 1978, the U.S. invested 8.87 percent of its value added into new capital expenditures whereas Indiana only invested 8.43 percent. This loss of advantage in new capital expenditure may be part of the cause in the lowered value added per wage dollar spent.

Joel C. Webster

INDIANA INDUSTRIAL ELECTRICITY SALES
(Seasonally adjusted in millions of kilowatt hours)

	Feb. 1982	*Jan. 1982*	*Feb. 1981*	*Percent Change From*	
				One Month Ago	*One Year Ago*
Anderson	27.6	21.4	21.5	28.5	27.9
Bedford	10.7	11.5	16.8	– 6.0	36.3
Bloomington	3.6	3.9	3.1	– 7.7	16.1
Columbus	17.7	16.7	19.4	6.0	– 8.8
Connersville	8.3	6.1	9.6	36.1	–13.5
Crawfordsville	12.0	10.7	10.8	12.1	11.1
East Chicago	23.2	22.9	31.2	1.3	–25.6
Elkhart	22.9	20.7	19.8	10.6	15.7
Evansville	45.5	38.7	45.9	17.6	– 0.9
Fort Wayne	45.2	40.2	43.5	12.2	3.7
Frankfort	8.8	7.9	8.3	14.3	6.0
Gary	188.1	192.8	201.9	– 2.4	– 6.8
Goshen	8.8	7.7	9.8	14.3	–10.2
Hammond	52.9	50.7	58.1	4.3	– 9.0
Huntington	4.7	4.6	5.5	2.2	–14.5
Indianapolis	316.8	319.2	352.1	– 0.8	–10.0
Jeffersonville	5.7	5.5	6.5	3.6	–9.5
Kokomo	59.7	62.4	72.1	– 4.3	–17.2
Lafayette	36.4	36.1	40.7	.8	–10.6
La Porte	15.0	13.5	15.1	11.1	– 0.7
Logansport	8.0	9.9	8.9	–19.2	–10.1
Madison	2.4	2.5	2.6	– 4.0	– 7.7
Marion	28.6	25.6	27.1	11.7	5.5
Michigan City	43.1	42.9	41.4	.47	4.1
Mishawaka	4.1	3.5	2.1	17.1	95.2
Muncie	14.0	12.6	18.6	11.1	–24.7
New Albany	4.6	5.0	5.1	– 8.0	– 9.8
New Castle	7.2	7.2	9.2	0.0	–21.7
Peru	5.3	5.0	6.2	6.0	–14.5
Richmond	22.6	23.3	23.4	– 3.0	– 3.4
Seymour	2.6	2.4	2.6	8.3	0.0
South Bend	28.4	22.0	25.4	29.1	11.8
Terre Haute	26.3	27.1	31.8	– 3.0	–17.3
Valparaiso	8.2	8.0	8.3	2.5	– 1.2
Vincennes	3.0	2.8	3.9	7.1	–23.1
Wabash	6.5	5.6	7.7	16.1	–15.6
Indiana	1754.4	1734.8	1942.9	1.1	– 9.7

Davis, continued

tion of Economic Cooperation and Development, incentives to steel workers, and the tripartite relations between labor-management-government to find tax incentives to induce capital formation, are the best policies that can be utilized to accomplish this end.

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[1] Donald Lawrence Davis, Lillian Miles, and Becky Miles, "Historical Analysis of the Employment in the Gary-Hammond-East Chicago SMSA by Industrial Sector, 1970 to 1980," *Indiana Business Review*, Volume 56, April 1981, pp. 10-20.

[2] Luc Kiers, *"A Westview Special Study: The American Steel Industry, Problems, Challenges, Perspectives,"* Westview Press, 1980.

[3] Robert W. Crandall, *The U.S. Steel Industry in Recurrent Crisis*, The Brookings Institution, 1981.

Doty, continued

steel mills in the Lake-Porter county area are several steps ahead of mills in other areas of the United States. Our natural assets here, coupled with a more favorable financial climate and the determination of all segments of the steelworker population to match or surpass the foreign steel industry in productivity are sufficient reasons to be optimistic, to believe our area has a great future.

UNITED STATES-INDIANA BUSINESS INDICATORS*

(Seasonally adjusted indexes unless otherwise noted; base period: 1967 — 100)

	United States				*Indiana*			
	Latest Month		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
EMPLOYMENT								
Nonagricultural employment	Feb.	138.2	138.1	138.7	Feb.	116.5	116.5	121.6
Manufacturing employment	Feb.	100.2	100.4	103.8	Feb.	86.4	86.8	92.9
Average weekly hours (No.)†	Feb.	38.9	37.1	39.5	Feb.	39.4	38.0	39.4
Average weekly earnings ($)†	Feb.	324.8	312.0	306.1	Feb.	384.2	369.7	361.7
Nonmanufacturing employment	Feb.	154.5	154.3	153.6	Feb.	137.0	136.8	140.0
Unemployment rate (%)	Feb.	8.8	8.5	7.4	Feb.	12.1	12.6	8.8
Unemployment-married males (%)	Feb.	5.3	5.3	4.1	—	—	—	—
Continued unemployment claims	—	—	—	—	Feb.	357.2	371.9	306.9
PRODUCTION								
Bituminous coal production	Jan.	169.7	152.0	170.1	—	—	—	—
Industrial electricity production	Nov.	143.9	145.0	147.8	—	—	—	—
Industrial electricity sales	—	—	—	—	Feb.	155.9	154.9	163.0
Manufacturing production	Feb.	140.1	137.6	151.2	Feb.	140.2	139.2	145.8
Raw steel production	Feb.	73.8	75.4	103.2	Feb.	115.5	99.8	140.0
CONSTRUCTION								
Construction activity-total	Jan.	298.2	302.6	334.4	Feb.	167.1	169.3	226.8
Residential housing starts	Feb.	74.2	69.7	100.7	Feb.	93.1	50.4	195.5
Residential expenditures	Jan.	306.9	313.6	396.6	Feb.	180.6	192.2	301.1
Nonresidential expenditures	Jan.	294.0	297.2	304.1	Feb.	188.6	194.0	241.1
Public expenditures	Jan.	198.4	207.0	254.0	—	—	—	—
Public works and utilities	—	—	—	—	Feb.	104.4	106.3	119.2
OTHER INDICATORS								
Personal Income Per Capita ($)[1]	Dec.	10,787.5	10,797.3	9,949.7	81:3	9,756.0	9,603.0	8,990.0
Passenger Car Sales (000's)	Feb.	633.0	535.0	764.0	Jan.	8.5	9.3	13.1
Year to Date (000's)	Feb.	1,168.0	535.0	1,412.0	Jan.	8.5	180.6	13.1

*Current indicators are preliminary and subject to revision

†Not seasonally adjusted

[1] SOURCES: Data on Indiana construction from McGraw-Hill Information Systems Company; Indiana passenger car registration from R.L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

Steel and the Regional Economy

L.P. SINGER

Professor of Economics, Indiana University-Northwest

As Professor Rosegger indicated last month in the *Indiana Business Review*, it is uncertain whether the down trend in domestic steel production would not have occurred even in the absence of imports. Our econometric models appear to support this conclusion. Steel imports have not entered significantly in any of our equations. On the other hand—possibly because of the close linkage of regional steel production with autos, particularly General Motors—automobile imports along with machine tool imports heavily impinge on regional steel output and employment.

Clearly, as foreign competitors developed equal—or in some instances more advanced—capital structures, the advantage which the U.S. held for more than half a century gradually vanished. With the production of capital about even, a competitive advantage, if any, has to be drawn from labor or management, and neither specially favors the U.S. or the Northwest Indiana Region.

The oil crunch had an irreversible impact on local steel. While imports of autos remained a small proportion of the local market through the 1960s, the absence of organized dealerships and parts restrained the inroads of imports. The oil crunch caused a dramatic change in taste (or at least an accommodation) among midwesterners. Large scale substitution of imports for domestic autos facilitated the vast expansion of dealerships, foreign car service firms, and parts supply outlets which drastically reduced the risks associated with foreign car ownership.

The steel forecasting equations used indicate a close correlation between local steel with national indicators as shown in Table 1. All indicator series are converted to indexes with a January 1974 base so as to avoid any scale effect. In addition, to avoid seasonal disturbances, all series measure the net gain or loss realized in the current month over the corresponding month a year earlier. Table 2 gives the aggregate driving variables.

Our objective is to forecast steel employment measured in man hours. To do this we combine the two monetary measures (X1 and X2) into a weighted predictor with a *long*—9 months—lead. Inventory changes (X3) and the proportion of vendors showing slow deliveries (X4) become an *intermediate* predictor with a four month lead. Similarly, the GNP inventory change (X5) and the installment debt change (X6) are weighted and transformed into a short predictor with a three month lead. In addition the driving aggregates X7 through X10 from Table 2 are combined into a single weighted driving predictor. We now add an index of business sentiment which is obtained from semi-annual surveys of over 400 businesses. The business sentiment index for steel is heavily weighted by order books of manufacturing firms. A logarithmic trend factor is added for the final Predictor Equation—

PREDICTOR EQUATION

Steel Employment Equals—

	0.3675	Long Indicator	(X1, X2)
+	0.5442	Intermediate Indicator	(X3, X4)
+	0.2029	Short Indicator	(X5, X6)
+	0.3652	Aggregate Driving Index	(X7-X10)
+	0.0023	Business Predictor Index	
-	0.00089	Logarithmic Trend	
+		Steel Employment lagged 12 months	

Figure 1 below tracks the predictions made by the equation with a 9 month lead and compares the results with the actual data. We note that we were able to predict with a great degree of precision the downturn of 1979, the rebound of 1980, and we may be accurately predicting the progress of the current recession. The models failed embarrassingly in the long halting recovery past 1977. In fact, our predictions were contrary to the events of 1977 to 1978. The general trend was about on target but it was completely off phase. We still wonder what went wrong. The most *plausible explanation is that the radical and* unpredictable changes in monetary policy and the changes in the automobile and import markets may have wreaked havoc with our model. In addition labor was

Table 1

Dependent Variable; Steel employment (man hours) differenced 12 months

Predicitor Variable: Indicators Differenced 12 months	*Partial Regression Coefficient = Weights*	*T-Statistics*	*Lead Time (Months)*
X1) M 1 B in 1972 dollars	0.4193	9	2.965
X2) M 2 in 1972 dollars	0.0813	8	4.119
X3) Change in inventories	0.00510	6	2.854
X4) Proportion of Vendors reporting slow deliveries	0.05758	5	5.394
X5) GNP inventory change	0.0281	3	6.864
X6) Change in installment debt	0.0290	2	3.736

hoarded and scheduled to maintenance and repairs. The regional steel market was clearly out of phase with national indicators.

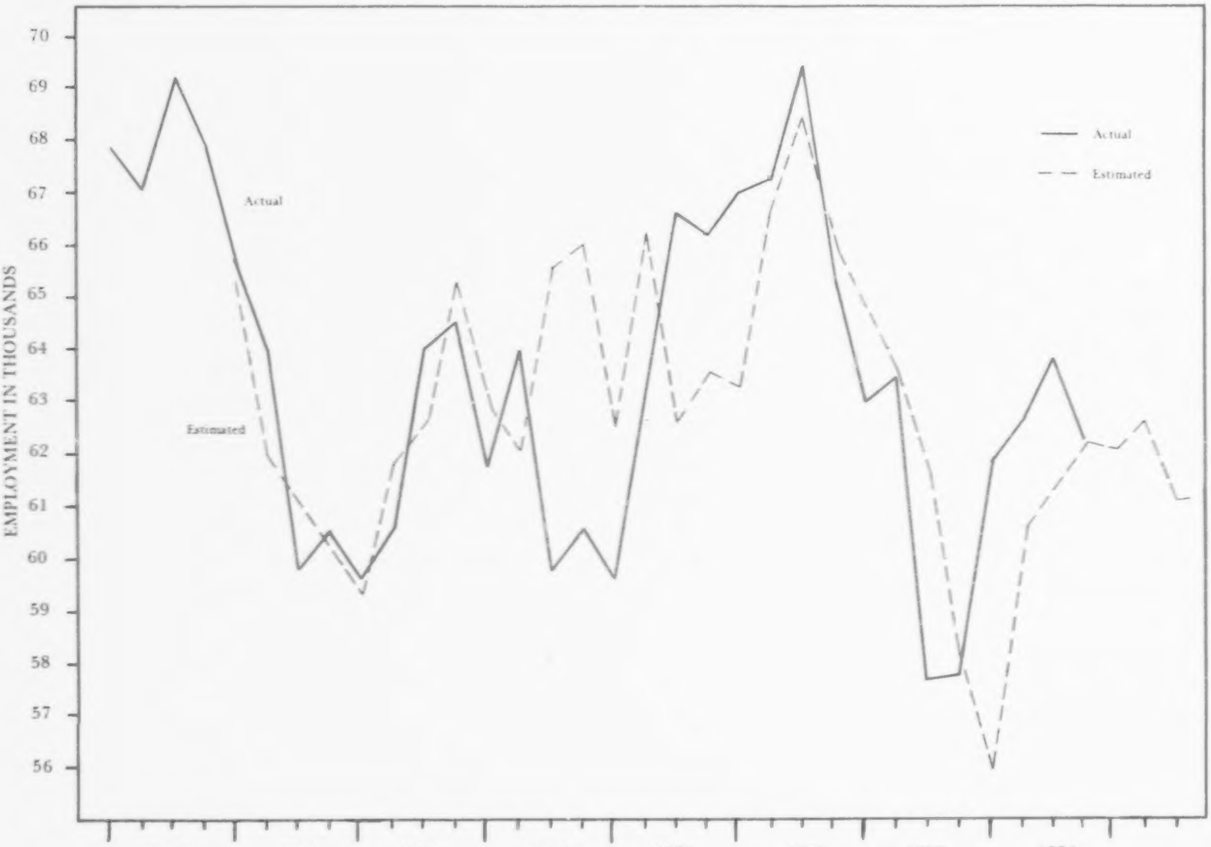
Our final step is to analyze by Generalized Least Squares the impact of steel on the local economy. Table 3 summarizes the results.

The GLS model clearly reveals the impact that steel has on the Region: for each gain or loss of 100 steel jobs, other things equal, an average of about 250 jobs are lost or gained in total regional employment. This conclusion is true even though steel shows a declining long term growth trend while total regional employment exhibits a slightly rising trend. Steel now

Table 2

Predictor Series	*Partial Regression Coefficient*	*Lead Time (Months)*	*T-Statistics*
X7) Real Fixed Investment Net of Imports	0.16283	2	9.7
X8) Real Auto Consumption Net of Imports	0.2319	3	4.41
X9) Real GNP	0.6805	3	3.48
X10) Housing Starts	0.1664	2	3.72

FIGURE 1
LOCAL STEEL EMPLOYMENT



accounts for about 23 percent of total employment and about 32 percent of total wage income.

The perception that steel dominates the Northwest Indiana Region is still very strong indeed. Historically, we have found that a strong link exists between expectations formulated by local businesses concerning future economic trends and the outlook for steel.

One of the problems of local steel is the seemingly perverse behavior of marginal wage costs in relation to productivity. Steel's marginal wages tend to decline as full utilization of capacity is approached. For example, as steel output in net tons increased about 29 percent from the February to April average in 1981 to the high of May 1981, the total wage bill rose only a hair above 5 percent. On the other hand, when output declined almost 38 percent from the May 1981 high to the year end low, the real wage bill fell less than 3 percent. Thus per net ton wage cost at the low levels of capacity utilization actually rose almost 27 percent. Consequently, recessions tend to affect steel's profitability relatively more than some other industries. Until this and other steel related issues are resolved, steel will continue as a dominant moving force for the Region.

Table 3
Partial Model

Variable	*GLS Coefficient**	*T-Statistics*	*Dependent Variable*
Long Indicator	0.479	2.53	Steel Employment Differenced 12 Months
Intermediate Indicator	0.059	3.29	
Short Indicator	0.0093	0.812	
Auto-Imports	0.1065	1.94	
Autos Squared	–0.0084	0.56	
Long Interest Rates	–0.754	1.68	
Real Investment	0.221	6.68	
Logarithmic Trend	–0.0093	4.99	
Steel Employment	2.47	1.98	Total Regional Employment Differenced 12 Months
Long Indicator	1.66	2.95	
Intermediate Indicator	0.303	4.94	
Short Indicator	0.168	0.49	
Prime Rate	–0.691	1.93	
Real GNP	0.00142	3.47	
Local Business Forecast Index	0.00072	0.949	
Logarithmic Trend	0.00103	1.181	

*GLS=Generalized Least Squares

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Indiana Business Review

Volume 57 May 1982

Eugene A. Brady and Morton J. Marcus **National Outlook Update / 2**

Gary Albrecht and Richard L. Pfister **Indiana's Revised Outlook / 6**

Frank K. Kushman **Relative Unemployment / 9**

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National Outlook Update

In this issue ▪ ▪ ▪

The Business Outlook at mid-year is a tradition of this *Review*. This year the conditions of uncertainty seem to be stronger than ever. Eugene Brady prepared a review article as a basis for our forecast. In the best tradition of economists, there was no consensus and the resulting product is a compromise.

From that starting point, Gary Albrecht and Richard Pfister have fashioned a revised forecast for the Indiana economy using the Econometric Model of Indiana. Their work is complemented by Frank Kushman's county-by-county examination of unemployment rates in Indiana during this recession.

This issue of the *IBR* does return to a former tradition. The reports from our metropolitan writers on the outlook in the diverse areas of the state will appear in a separate issue of the *Review* to be published in June.

Morton J. Marcus,
Editor

INDIANA BUSINESS REVIEW

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INTRODUCTION

Is it over yet? That is the question being asked throughout the nation during this second quarter of 1982 concerning the recession. Most economists are prepared to declare that an end to the recession is at hand, but they are reluctant to identify the specific date on which the decline has or will come to an end. Statistical evidence on the turnaround will not be forthcoming for several months. At this point (early May 1982) we can see the signs of a bottoming out in economic performance and suggestions of a moderate recovery in the remainder of 1982.

There is general agreement that the economy will improve with the tax cuts due July 1, so that the turnaround should take place during the third quarter of 1982. The White House and Congress are trading budget cuts and cutting remarks as they prepare for the election in November. Current budget deficit estimates assume substantial expenditure cuts by Congress. We expect that the Administration will have to give in some on the defense budget, and that Congress will reciprocate with further cuts in the non-defense budget. However, only minor cuts will occur in transfer payment income before the November elections; major revisions in these areas will be postponed until 1983.

INTEREST RATES AND CREDIT

High real interest rates remain the major cause of the continuing softness in the economy. Several major reasons continue to keep real rates of interest unusually high:

1. The financial markets do not believe the federal budget is under control.
2. Increased reservations about the whole area of "supply side" economics.
3. Belief that the Federal Reserve might monetize the deficits and increase inflationary expectations before the November elections.
4. Greater volatility of interest rates increases the risk of holding bonds and requires a higher return on them.
5. Higher marginal tax rates increase the after-tax real return required on bonds.
6. The growth of the more broadly defined money supply (now M2) is accelerated by higher interest rates, with a positive feedback effect.

To these explanations for the continued high nominal interest rates let us add three additional thoughts:

1. The Financial Reform Act of 1980 has fundamentally changed the structure and the mode of operation of the financial markets in the U.S. We used to categorize deposits into checking accounts, which were intended to be spent, and savings-type accounts, which were intended to be saved. No such separation can be made at the present time, and it is unclear whether money-market funds, for example, represent savings or uncompleted spending transactions. Possibly, even the depositors themselves don't know.

2. Since almost *all* deposits now pay interest rates, the extremely high interest rates simply reflect the possibility that the Fed policies have been far *too* tight and perhaps tighter than the Federal Reserve intended with the old financial structure in mind. What the Federal Reserve System has accomplished in the past six or nine months is the almost complete, but perhaps temporary, elimination of a rate of inflation that had built up over the last fifteen years. Many business leaders and economists now feel that the Fed overreacted, and that it should have been more

gradual in its methods of licking inflation.

3. Finally, the supply-side explanation for high real rates rests on the classic devaluation of the dollar that is taking place. In the same way that rising inflation benefits debtors, declining inflation rates hurt debtors. Who are these debtors? They are mortgage holders, small businesses and large corporations, among others, who have gone into both short-term and long-term debt. They are currently finding that, with disinflation (as opposed to deflation) the value of their assets (houses, finished products, etc.) isn't going up at a rate that is comparable to the rates they must pay on their liabilities. They are forced to commit a bigger portion of their incomes to pay down their past debts. As a result, many are left scrambling for funds to avoid default or bankruptcy, and interest rates move up accordingly. "Crowding out" to a supply sider isn't the U.S. Treasury crowding out the private sector, but rather the private sector, in its search for additional capital, crowding out the Government, which is only a price-taker in the money and capital markets.

It is ironic that this Catch-22 situation exists at the present time in the money and capital markets. High interest rates cause recession and increase the debt burdens of households and firms alike. Recession, deregulation, high real interest rates and increased foreign competition have put many firms and households on the edge of insolvency. Business failures in 1981 were 50 percent higher than in 1980, and in the early part of 1982, the bankruptcy rate in the U.S. was up 55 percent above the same interval in 1981. The end is not in sight. Unfortunately, a deterioriating financial climate is triggering a demand for funds that is keeping real rates of interest at or near double-digit levels.

The same sort of thing happened during the 1973-75 recession, but the acute financial stress was for the most part limited to real estate related businesses. At the present time the financial crisis is being felt across the broad spectrum of American business, including construction, retailing, airlines, trucking, agriculture, and farm implements. Currently, most medium and small sized businesses are under-capitalized, and must go to financial intermediaries for their credit needs. However, the charges are currently running to as much as five points above prime. Either the rate of inflation must rise or the money rate or interest rate must decline in the coming months. We expect the latter. But if real interest rates remain at or near present levels, the 1981-82 recession could turn into the 1981-82 depression.

INFLATION

The bright spot in the current economic outlook is the major dent that the recession is putting in the rate of inflation. Inflation has declined markedly in the last year at both producer and consumer levels. The implicit GNP deflator, which was increasing at a double-digit rate toward the end of 1980, declined steadily throughout 1981 from 9.8 percent in the first quarter to 8.4 percent in the fourth quarter. It is estimated to be in the neighborhood of 6 percent to 7 percent at the present time. Both the consumer price index, which is currently rising at a rate of only about 4 percent, and the producer price index, which has actually declined in recent months, indicate that inflationary pressures are at least temporarily abating. This is for the most part very good news indeed. Since the producer price index is a leading indicator of the consumer price index, we can expect the rate of inflation, as measured by consumer prices, to continue to fall or remain steady in the coming months.

Why is the rate of inflation coming down so rapidly? It appears to be a combination of tight money, soft demand, and good luck. Food and energy prices, which are usually considered separately from other prices which make up "core" inflation, have been for the most part flat or falling so far this year. These two "exogenous" sets of prices have reflected the bumper crops of last year together with the world-wide oil glut.

Is the sharply lower current rate of inflation here to stay, or is it simply a recession-induced phenomenon that will disappear when the recession ends? Will the recovery bring sharply higher rates of inflation? In the postwar period, inflation has been cyclical, with prices tending to rise fastest at or near the peak of the business cycle. In earlier recessions prices actually declined, but after 1965 inflation tended to trend upward even during periods of slack economic activity. However, recently there have been significant changes in the structure of much of American industry, with rapid deregulation taking place in the trucking, airline, and financial sectors. The current problems of housing and autos have softened raw materials prices across the board, and the commodity futures markets have all shown sharp declines over the last few months. The slowdown in raw materials prices increases will continue to dampen inflationary pressures over the next two years.

REAL OUTPUT

With contrasting views, the best we can see is a flat period for the second quarter of this year. During this period output will increase at about a 3 percent annual rate in the third quarter and a 4 percent annual rate in the last quarter of 1982. The upswing in economic activity should continue throughout 1983 at a moderate pace, without undue inflationary pressure (see Table 1).

EMPLOYMENT

The rate of unemployment has recently exceeded the previous 1974-75 recession. Current unemployment rates, the worst of the post-WWII era, will continue at or near current levels throughout the remainder of 1982. When viewed from a standpoint of labor utilization, the 1980 recession has continued into 1982, with two major upward rachets in the unemployment rate. In 1979, unemployment remained at or near 6 percent, rising to 7.5 percent from

Table 1

I.U. FORECAST

May 3, 1982

	1982:2	1982:3	1982:4
Percent change in real GNP (AR)	0.0	3.0	4.0
Percent change in consumer price index (AR)	2.6	5.0	6.0
Prime rate at commercial banks	15%	14%	13%
U.S. unemployment rate	9.4	9.6	9.4

AR = annual rate

the middle of 1980 through mid 1981, then escalating to almost 9 percent in 1982. The recession has already turned into a depression in industries like autos, agricultural equipment, construction, chemical equipment, machine tools, and electrical machinery. Unemployment rates, a lagging indicator, will remain high for the entire year.

Every time the unemployment rate goes up 1 percent, the federal deficit rises about $25 billion. However, the statistics on unemployment are biased downward because they exclude "discouraged" workers from the labor force. At the present time, about 1.3 million workers fall into this category, and if they were counted in the unemployment statistics, the rate of unemployment would have been 12.5 percent for the first quarter of 1982. In addition, there are about 5.5 million workers in the U.S. who have taken part-time jobs because they cannot find full-time work. In brief, the unemployment situation currently is being compared by some to the Great Depression of the 1930s. As usual, unemployment falls disproportionately on the young, the uneducated and the non-white. Blacks, who make up 10 percent of the population in this country, have an unemployment rate of 20 percent, and make up about 40 percent of the discouraged workers in America.

BUSINESS FIXED INVESTMENTS

Real spending on plant and equipment during 1982 will decline by about 1 percent, if the recent surveys made by the Department of Commerce hold up. The major factor, of course, is the unusually high real rate of interest, which is choking the implementation of all but the most optimistic investment projects. The latest Department of Commerce report shows that nonfarm businesses plan to spend a little less than $350 billion on new investment projects in 1982, up about 7 percent from 1981 levels if you don't adjust for inflation.

In addition to high interest rates, low capacity operating rates are depressing the demand for new plant and equipment. Capacity utilization rates have deteriorated steadily from over 85 percent of manufacturing capacity in early 1979 to a little more than 70 percent currently. During the 1974-75 recession the capacity utilization rate hit 69 percent (in March 1975), and there is still some chance that this dubious record will be broken this year. Recent activity compared with that of early 1979 looks quite dismal. Domestic auto sales are down nearly 50 percent, housing starts are down 50 percent, machine tool orders are down 65 percent, overall industrial production is off 10 percent and steel production is off 40 percent. High interest rates and low capacity utilization spell continued softness in plant and equipment spending until business is convinced that consumer spending is likely to continue its upward movement.

CONSUMER SPENDING

Retail sales have been sluggish so far in 1982. Economic history tells us that retail sales depend on employment, so until employment improves retail sales will remain low.

The drop in real activity has not been as bad yet as it was during the 1974-75 recession, when retail sales fell 3.6 percent, but it is already worse than the 1980 recession drop of 2.4 percent. Since consumption spending amounts to about two-thirds of national income, retail sales will dictate the pattern of the recovery.

We have predicted a flat second quarter and an upturn in activity in the third quarter of this year. This outlook is based on the cut in individual income taxes and the increase in Social Security benefits that is scheduled for July 1 of 1982. The $45 billion or so added to consumer income as a result of the anticipated tax cut and social security benefit increase is vital to a turnaround this year.

HOUSING

The two-year housing slump continued, and a recent survey of home builders indicated that somewhere between 50 percent and 70 percent of their numbers were operating in the red, and that they could go out of business in seven to nine months if conditions do not improve. With mortgage rates lingering in the 17 percent to 18 percent range (plus big points), the housing market is as sick as it has been since the 1930s.

Although the short-term outlook is somewhat improved for the housing industry, there is less optimism for the long-term. The Administration's supply-side orientation is pushing for investment projects that will increase productivity. The Financial Reform Act of 1980, together with the deregulation of the entire financial structure, could be detrimental to housing over the long run. Corporations are getting access to funds generated via money-market mutual funds, which purchase short-term corporate notes. It is fairly certain that a large proportion of them have been diverted from the thrift institutions. Reaganomics is supposed to restore productivity growth, and housing is not included in this program. It is possible that higher rates of individual and corporate saving, coupled with lower rates of government dissaving, will generate enough funds to have a viable housing market over the long term, but the old idea that housing is on par with Mom, Apple Pie and Baseball has begun to fade.

Just as low operating rates are putting a crimp in new investment plans, the disinflation in housing prices is going to cut down on housing as a major investment for most households. If interest rates remain high, so-called "creative finance" will remain a major source of housing finance. The financial chaos that could result from the bursting of creative finance balloon payments, coupled with the implicit decline in house prices that result from creative financing at below market rates, could wreak havoc with the housing markets for years to come.

AUTOMOBILES

The outlook for autos continues to be a major question. Domestic production fell 31 percent in the first quarter of 1982, which represented the lowest level of output in thirty years. The big three have scaled down their production plans for the interval through September 30 of this year, and anticipate they will make about 20 percent fewer cars in the second quarter of 1982 than they did a year earlier. The latest round of rebates by the major U.S. auto manufacturers didn't seem to do much good. After two months of price promotions that ended at the end of March, domestic deliveries declined in March 23 percent from a year earlier. Import sales were also off in March, declining 21 percent. General Motors began to offer interest rate subsidies instead of cash rebates, since it appears that consumers have viewed rebates as a permanent price reduction. When the rebates are lifted, consumers just wait for the future rebates which they know will be forthcoming.

Auto sales have been running slightly above a seasonally adjusted annual rate of 5.2 million units, a low level by any standard. There is some light at the end of the tunnel for the automobile sector, however. The level of production has been less than the level of sales for the first quarter of 1982, so that inventories of unsold autos declined significantly during the first quarter, even though demand was weak. We anticipate that about 6.5 million cars will be produced in the U.S. during 1982, including those produced domestically by foreign manufacturers.

INVENTORIES

One lesson that was well learned from the 1974-75 recession was "don't get caught with excessive inventories." Inventory liquidation began last December, with $3.4 billion slashed from outstanding inventories in trade and manufacturing. Another $2.1 billion was cut from inventories in January of this year, and this same amount was wiped out in February, with additional declines in March. These inventory declines amount to about half of the inventory buildup that occurred in the first part of the recession, between July and October of 1981. Recent efforts to get rid of unwanted inventory have had an important impact on the producer price index, and are probably the most important reason that producer prices have been declining over the last two months. However, excess inventories do not appear to be a problem for the U.S. economy at the present time. In fact, the improvement of sales anticipated with a second-half recovery will stimulate moderate inventory building once again.

NET EXPORTS

The net export sector has been ignored in many forecasts, but it has a powerful influence on the outlook that many forecasters have overlooked. For example, 84 percent of the decline in real gross national product during 1981 was due to a negative shift in the trade balance.

The major cause of our deteriorating net export position is, as it was last October, an overvalued dollar due to high U.S. interest rates. As long as the current short-term U.S. interest rates remain in the 14 percent to 15 percent range, the dollar is going to remain overvalued and the trade balance will continue to weaken. The European community, which only a few years ago was criticizing us for what they felt was too much easy money in the U.S., are now sharply critical of the "new post-1979" monetary policy, which caused U.S. interest rates to skyrocket. The European concern with high U.S. rates is real and vital, since their economies are not strong either. Any run-up of European interest rates will abort the recovery on the Continent. On the other hand, if they keep their interest rates low, the European currencies will continue to depreciate against the dollar, since relative rates of interest are one of the major determinants of exchange rates. The higher U.S. interest rates have caused liquid funds to be shifted from European assets into dollar assets. What really matters here are real, rather than nominal rates of interest. An investor can make an 8 percent inflation-adjusted return on dollars deposited outside the U.S., while, for example, similar investments in Swiss franc investments outside Switzerland yield only 3 percent after adjusting for inflation. This is the major reason that the dollar is strong at the present time.

Our merchandise trade balance has deteriorated seriously over the last decade, from a $2.6 billion surplus in 1970 to a deficit of $27.8 billion in 1981. During the last four months of 1981 we were running a $4.5 billion deficit *monthly* in our merchandise trade account. Even with these high deficits in our merchandise account, we have been able to sustain a surplus of about $24 billion in our net export account last year, which includes both goods and services. It is the service component of the income accounts in the foreign trade sector that has been saving us for the last few years.

SUMMARY

We are forecasting a recovery of moderate proportions in the second half of 1982. Good faith efforts by political leaders should bring the deficit to a level which will assuage fears in the financial markets that short-term rates will climb to 20 percent again. Unemployment rates will begin to moderate as the year progresses, but they will not be at politically satisfactory levels (for incumbents) before the elections. Consumer spending, stimulated by a tax cut and stabilized employment prospects, will lead to a slow improvement in business spending on inventories and, in time on the new productive resources the nation requires for long-term improvements. No boom is anticipated, and the downside risks for this forecast are considerable.

Indiana's Revised Outlook

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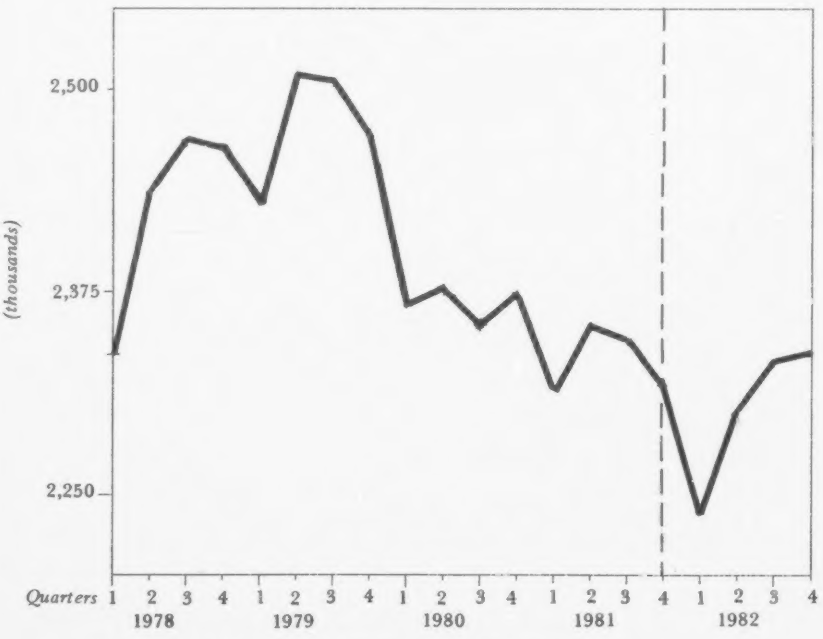
A forecast made in mid-May using the I.U. Econometric Model of Indiana (EMI) reveals that the Indiana economy will not perform as well as was previously expected (see the December *IBR*). The major reason for this downward revision is the prolonged weak performance of the U.S. economy. The previous Indiana forecast was predicated on GNP declining 1.0 percent from the last quarter of 1981 to the first quarter of 1982. Preliminary figures, however, indicate that real GNP actually dropped 3.9 percent. Also, it was expected that real GNP would increase by 1.0 percent in 1982:2, this has been revised down to 0.0 percent. The new expectation is that real GNP will increase by 3.0 percent and 4.0 percent in 1982:3 and 1982:4 respectively.

SUMMARIZING THE FORECAST REVISIONS:

1. Employment is expected to drop more from the fourth quarter of 1981 to the first quarter of 1982 and to increase less from the first to the second quarter of 1982 than the forecast made in mid-November indicated.

Figure 1

TOTAL EMPLOYMENT: 1978:1-1982:3*
(not seasonally adjusted)



*Data through 1981:4 are historical; later points are forecast values.

Table 1

EMI SUMMARY VARIABLES†

Variable	*1981:3*	*1981:4*	*1982:1*	*1982:2*	*1982:3*	*1982:4*
Personal income*	**54,685.00**	**55,200.45**	55,440.50	56,436.20	58,675.08	60,090.54
percent change (AR)	**8.32**	**3.82**	1.75	7.38	16.84	10.00
Real personal income*	**27,943.28**	**27,697.17**	27,473.00	27,651.25	28,331.76	28,519.48
percent change (AR)	**–.68**	**–3.48**	–3.20	2.62	10.21	2.68
Wages & salary disbursements*	**33,826.00**	**33,568.87**	33,623.19	33,891.22	35,211.49	35,962.90
percent change (AR)	**3.54**	**–3.01**	.65	3.23	16.52	8.81
Real wage & salary disbursements*	**17,284.62**	**16,843.39**	16,661.64	16,605.19	17,002.24	17,068.36
percent change (AR)	**–5.07**	**–9.83**	–4.25	–1.35	9.91	1.56
Nonmanufacturing employment #	**1,458.30**	**1,464.83**	1,416.84	1,453.81	1,474.48	1,482.10
Manufacturing employment #	**663.87**	**637.90**	613.68	618.50	630.91	639.75
Establishment employment #	**2,122.13**	**2,102.73**	2,030.53	2,072.31	2,105.39	2,121.85
Total number employed #	**2,346.23**	**2,317.53**	2,237.66	2,299.86	2,332.32	2,337.26
Percent unemployment (NSA)	**9.04**	**11.22**	13.41	12.61	11.69	11.05
Percent unemployment (SA)	**9.37**	**11.88**	12.30	12.59	12.13	11.70

† Boldface values are historical data; later values are forecasted.
1981:4 Values are Preliminary
AR = Annual Rate
* = Millions of Dollars SAAR
# = Thousands of Persons, not Seasonally Adjusted
NSA = Not Seasonally Adjusted
SA = Seasonally Adjusted

2. Growth in real personal income, which was previously expected to be positive in the first quarter of 1982 is now estimated to be negative before turning upward later in the year.

3. Real wages and salaries are expected to decline in both the first and second quarters of 1982. It had been forecasted that real wages and salaries would increase in both of these quarters.

EMPLOYMENT

From Figure 1 it is seen that the forecast level of employment for the first quarter of 1982 is below the level of employment in the four previous first quarters. This situation is also true when comparing the second quarter of 1982 to the prior second quarters and the third quarter of 1982 to previous third quarters. However the fourth quarter of 1982 breaks this pattern as the level of employment in the fourth quarter of 1982 is higher than the level of employment in 1981. Although one observation doesn't make a trend, the level of employment in the fourth quarter of 1982 does provide a basis for hope that the employment decline in Indiana has stopped.

From Table 1 it is seen that the increase of total employment from the fourth quarter of 1981 to the fourth quarter of 1982 is expected to exceed 19,000. Most of this increase, 90 percent or nearly 17,300 jobs, will be a result of an increase in non-manufacturing employment. Retail trade, service, and miscellaneous sectors account for the vast majority of the increase in non-manufacturing employment. Employment in retail trade is expected to increase by 6,500 people from 1981:4 to 1982:4, but will still be approximately 20,000 less than employed in 1979:4. The strong growth trend of service and miscellaneous, which was only slightly retarded by the recession, is forecasted to rise by a little more than 10,000 from 1981:4 to 1982:4.

Durable manufacturing is shown to rise (Table 1) by 3,860 from 1981:4 to 1982:4. No sector stands out in durable manufacturing in terms of rapid growth. The fastest growth in percentage terms is in instruments which grows by 2.6 percent. Other industries such as steel, and autos and parts, have some growth in employment but at a lower rate than in instruments. Non-durable manufacturing decreases by 2,070 employees. Almost 1,000 jobs are lost in food processing from 1981:4 to 1982:4, and 600 jobs are lost in chemicals in the same time period.

In Table 1 the seasonally adjusted unemployment rate is shown to peak in the current quarter (1982:2) at 12.5 percent. This rate, although high, would be still higher were it not for the fact that Indiana's labor force is declining. If the labor force were currently at its 1980:2 level, the unemployment rate would be 13.6 percent. The unemployment rate is expected to decline rather rapidly in the last half of 1982, ending at 11.7 percent in the fourth quarter.

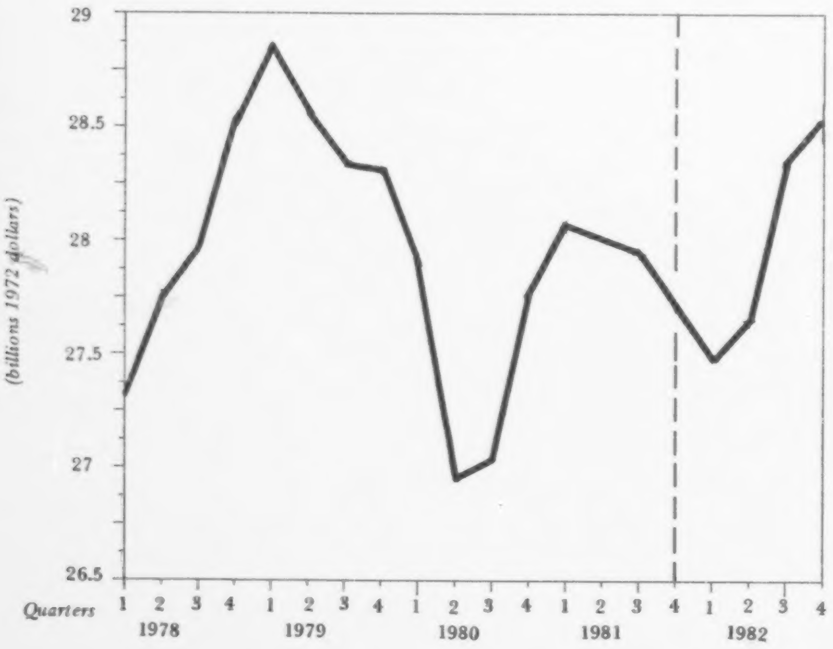
PERSONAL INCOME

Figure 2 shows that Indiana's real personal income has been declining since 1981:1 but may have bottomed out in 1982:1. The upturn in 1982:2 is a respectable 2.6 percent, but in 1982:3 the growth rate is a large 10.2 percent. This large jump in real personal income, coming out of a low point, is not unprecedented. The nadir of real personal income in 1980:2 was followed by a growth of 1.1 percent in 1980:3 but the next quarter (1980:4) had a growth rate of 11.3 percent.

All components of personal income increase from 1982:2 to 1982:3. Table 1 shows that real wages and salaries grew by 9.9 percent. Dividends, interest and rent are growing at a slightly lower rate, around 9.0 percent, while transfer payments are growing by around 12.5 percent from 1982:2 to 1982:3 reflecting the indexation in social security changes.

Figure 2*

REAL PERSONAL INCOME



*Data through 1981:4 are historical; later points are forecast values.

CONCLUSION

The turning point in Indiana's economy is approaching. In terms of real personal income the turning point is expected to occur in the second quarter of 1982. According to the unemployment rate, the economy will start improving in the third quarter of 1982. Finally, in terms of the actual number of people employed compared with the year ago levels, the economy begins improving in the fourth quarter of 1982.

Indiana's
Business

RELATIVE UNEMPLOYMENT

Every recession brings with it concern about rising unemployment. This concern often focuses on the most widely publicized measure of unemployment: the unemployment rate. Indiana's unadjusted unemployment rate was 13.3 percent in February. Just how high is this statistic? To compare, consider that the state's average unemployment rate for the five years 1977-81 was 7.3 percent. If we divide the February rate by the five-year average rate we create a ratio showing the two rates relative to each other. For Indiana, this ratio equalled 1.82. That is, February's unemployment rate was 82 percent higher than the longer-run five-year average.

Table 1 details this ratio for each of Indiana's ninety-two counties. Column 1 lists the February 1982 unemployment rate. Column 2 lists each county's average unemployment rate from 1977 to 1981. Column 3 then, is the ratio of the two rates (Column 1 divided by Column 2). Ohio County's February unemployment rate was 31.3 percent, far and away the highest in the state. However, its long term average rate was also the highest in the state. Thus, Ohio County's ratio in Column 3 is only 35th highest, at 1.92. Thirty-four other counties have higher ratios. It can be argued that these counties have been hit harder by the 1981-82 recession than has Ohio County, even with its 31.3 percent unemployment rate. In February, Carroll County, for example, had an unemployment rate of 12.0 percent, which is below the state rate. Carroll County's ratio in Column 3 is 2.26 however, indicating February's rate is roughly two and one-fourth times greater than the county's five-year average. Carroll County is not alone. A total of twenty-five counties had February unemployment rates at least twice as high as their five-year average. The highest ratio belongs to Gibson County, where February's rate was 2.59 times larger than its five-year average. These twenty-five counties have been hit hardest in terms of relative unemployment during the recent recession.

Table 1

COMPARING UNEMPLOYMENT RATES

	Feb. 1982	5 Yr. Avg.	Col. 1/ Col. 2	Rank	Feb. 82/ St. Feb. 82	5 Yr./ St. 5 Yr. Avg.	Col. 5/ Col. 6
Adams	13.8	6.9	2.00	25	1.04	0.95	1.09
Allen	12.2	7.0	1.74	54	0.92	0.95	0.97
Bartholomew	13.9	6.8	2.04	20	1.05	0.93	1.13
Benton	10.0	5.6	1.79	49	0.75	0.77	0.97
Blackford	17.0	8.2	2.07	17	1.28	1.12	1.14
Boone	9.2	5.6	1.64	74	0.69	0.76	0.91
Brown	10.5	5.4	1.94	34	0.79	0.74	1.07
Carroll	12.0	5.3	2.26	6	0.90	0.72	1.25
Cass	17.8	7.6	2.34	4	1.34	1.04	1.29
Clark	15.3	7.6	2.01	22	1.15	1.04	1.11
Clay	15.7	7.0	2.24	7	1.18	0.95	1.24
Clinton	11.4	6.9	1.65	72	0.86	0.94	0.91
Crawford	17.2	13.4	1.28	92	1.29	1.84	0.70
Daviess	11.8	8.1	1.46	90	0.89	1.12	0.79
Dearborn	17.7	8.9	1.99	29	1.33	1.22	1.09
Decatur	10.5	5.8	1.81	47	0.79	0.79	1.00
DeKalb	18.5	8.5	2.18	10	1.39	1.17	1.19
Delaware	18.5	8.7	2.13	13	1.39	1.19	1.17
Dubois	12.3	6.2	1.98	31	0.93	0.86	1.08
Elkhart	12.5	7.7	1.62	78	0.94	1.05	0.90
Fayette	15.5	10.4	1.49	89	1.17	1.43	0.82
Floyd	14.7	7.9	1.86	42	1.11	1.08	1.03
Fountain	15.3	7.4	2.07	17	1.15	1.01	1.14
Franklin	18.9	9.4	2.01	22	1.42	1.29	1.10
Fulton	15.0	6.7	2.24	7	1.13	0.91	1.24
Gibson	14.5	5.6	2.59	1	1.09	0.77	1.42
Grant	14.6	9.3	1.57	84	1.10	1.28	0.86
Greene	15.5	9.5	1.63	76	1.17	1.30	0.90
Hamilton	6.7	4.0	1.68	65	0.50	0.55	0.91
Hancock	9.5	5.5	1.73	57	0.71	0.75	0.95
Harrison	16.3	8.8	1.85	44	1.23	1.21	1.02
Hendricks	6.3	4.0	1.58	83	0.47	0.55	0.85
Henry	19.4	11.0	1.76	52	1.46	1.50	0.97
Howard	20.5	10.3	1.99	29	1.54	1.41	1.09
Huntington	10.9	5.8	1.88	41	0.82	0.80	1.03
Jackson	16.8	8.4	2.00	25	1.26	1.15	1.10
Jasper	13.3	7.9	1.68	65	1.00	1.09	0.92
Jay	13.5	8.5	1.59	82	1.02	1.17	0.87
Jefferson	14.5	10.5	1.38	91	1.09	1.44	0.76
Jennings	14.3	6.7	2.13	13	1.08	0.92	1.17
Johnson	11.2	5.9	1.90	40	0.84	0.81	1.04
Knox	13.1	8.1	1.62	78	0.99	1.11	0.89
Kosciusko	10.1	6.1	1.66	70	0.76	0.84	0.90
Lagrange	11.4	6.6	1.73	57	0.86	0.90	0.96
Lake	14.9	8.6	1.73	57	1.12	1.18	0.95
LaPorte	13.5	7.6	1.78	51	1.02	1.04	0.98
Lawrence	21.4	9.1	2.35	3	1.61	1.25	1.29
Madison	22.5	9.6	2.34	4	1.69	1.31	1.29
Marion	10.8	6.9	1.57	84	0.81	0.94	0.86
Marshall	13.3	7.2	1.85	44	1.00	0.99	1.01
Martin	16.4	9.8	1.67	68	1.23	1.34	0.92
Miami	16.7	8.5	1.96	32	1.26	1.16	1.09
Monroe	14.1	7.6	1.86	42	1.06	1.04	1.02
Montgomery	9.8	5.7	1.72	60	0.74	0.78	0.95
Morgan	11.1	6.4	1.73	57	0.84	0.88	0.95
Newton	12.2	6.4	1.91	38	0.92	0.88	1.05
Noble	17.1	7.8	2.19	9	1.29	1.07	1.21
Ohio	31.3	16.3	1.92	35	2.35	2.23	1.05
Orange	18.2	10.8	1.69	63	1.37	1.49	0.92

Only six counties (Posey, Fayette, Daviess, Starke, Jefferson, and Crawford) had a February rate that was *not* more than 50 percent higher than their five-year average. These six counties, then, have faired well *relative* to the remaining counties.

Another way of looking at these same February unemployment figures is to compare them to the State's 13.3 percent unemployment rate. Column 5 is a ratio that does just that. It is the division of each county's February rate by the State's February rate. Six counties (Ohio, Switzerland, Madison, Lawrence, Howard, and Scott) have unemployment rates at least half again larger than the state. Seven counties (Montgomery, Hancock, Posey, Boone, Tippecanoe, Hamilton, and Hendricks) have unemployment rates equal to less than three-fourths of the state's unemployment rate. Current data alone does not tell the whole story. Column 6 shows for each county the ratio of its five-year average rate to the state's five-year rate. That is, it shows how a county's rate has compared, on average, to the state's rate over the past five years. By combining this

Owen	15.3	7.6	2.01	22	1.15	1.05	1.10
Parke	15.0	7.7	1.95	33	1.13	1.06	1.07
Perry	17.4	10.2	1.71	61	1.31	1.39	0.94
Pike	10.9	6.3	1.73	57	0.82	0.87	0.94
Porter	11.6	6.8	1.71	61	0.87	0.93	0.94
Posey	9.3	6.2	1.50	88	0.70	0.85	0.82
Pulaski	10.8	6.7	1.61	80	0.81	0.92	0.88
Putnam	13.7	8.2	1.67	68	1.03	1.12	0.92
Randolph	17.8	8.9	2.00	25	1.34	1.22	1.10
Ripley	15.3	8.5	1.80	48	1.15	1.16	0.99
Rush	13.8	8.2	1.68	65	1.04	1.13	0.92
St. Joseph	11.4	7.0	1.63	76	0.86	0.96	0.90
Scott	20.3	12.4	1.64	74	1.53	1.70	0.90
Shelby	12.9	8.4	1.54	87	0.97	1.15	0.84
Spencer	13.5	7.4	1.82	46	1.02	1.02	1.00
Starke	12.8	9.0	1.42	91	0.96	1.23	0.78
Steuben	13.8	7.2	1.92	35	1.04	0.99	1.05
Sullivan	12.6	7.5	1.68	65	0.95	1.03	0.92
Switzerland	25.1	10.3	2.44	2	1.89	1.42	1.33
Tippecanoe	8.7	5.3	1.64	74	0.65	0.72	0.90
Tipton	16.7	7.7	2.17	12	1.26	1.05	1.20
Union	12.9	8.0	1.61	80	0.97	1.10	0.88
Vanderburgh	11.4	6.5	1.75	53	0.86	0.88	0.98
Vermillion	17.3	8.2	2.11	15	1.30	1.13	1.15
Vigo	13.5	6.8	1.99	29	1.02	0.94	1.09
Wabash	14.2	6.9	2.06	19	1.07	0.95	1.13
Warren	10.0	5.0	2.00	25	0.75	0.68	1.10
Warrick	10.3	5.4	1.91	38	0.77	0.75	1.03
Washington	15.8	9.5	1.66	70	1.19	1.30	0.92
Wayne	16.1	9.0	1.79	49	1.21	1.23	0.98
Wells	12.0	5.5	2.18	10	0.90	0.75	1.20
White	13.7	6.6	2.08	16	1.03	0.90	1.14
Whitley	13.0	6.8	1.91	38	0.98	0.94	1.04
State	13.3	7.3	1.82	–	1.00	1.00	1.00

MAN-HOURS IN INDUSTRIAL PRODUCTION
(Seasonally adjusted data)

	United States				*Indiana*			
	Latest Month **(millions)**		*Percent Change From*		*Latest Month* **(thousands)**		*Percent Change From*	
			One Month Ago	*One Year Ago*			*One Month Ago*	*One Year Ago*
Manufacturing	**Mar.**	**764.3**	**–1.2**	**–5.4**	**Mar.**	**24,405.4**	**–5.7**	**–10.9**
Food	Feb.	65.0	2.0	–0.9	Mar.	1,380.8	–3.0	–2.6
Apparel and textiles	Feb.	77.3	19.6	–6.7	Mar.	371.0	–1.1	–3.6
Lumber and wood	Mar.	23.7	–2.9	–9.7	Mar.	594.4	–1.4	–17.2
Furniture	Mar.	16.8	–3.0	–7.3	Mar.	668.8	0.6	–11.1
Paper	Mar.	28.8	–2.9	–4.6	Mar.	522.0	–0.6	–12.1
Printing	Feb.	50.9	1.1	7.3	Mar.	1,085.0	1.0	–3.1
Chemicals	Mar.	44.1	–2.1	–3.2	Mar.	1,245.4	–5.5	1.5
Petroleum and products	Mar.	8.4	–1.5	–5.1	Mar.	165.2	–4.8	–18.0
Rubber and plastics	Feb.	28.7	3.9	–3.3	Mar.	1,145.4	–1.2	–9.8
Stone, clay and glass	Mar.	23.1	0.5	–10.8	Mar.	839.0	4.8	–9.6
Primary metals	Mar.	39.8	–2.7	–15.1	Mar.	3,832.1	–4.4	–17.5
Fabricated metals	Mar.	58.8	–1.7	–12.5	Mar.	2,094.1	–5.2	–8.5
Non-electrical machinery	Mar.	102.9	–3.8	–4.7	Mar.	2,793.5	–3.1	–11.0
Electrical machinery	Feb.	82.5	2.7	–1.5	Mar.	3,832.2	0.9	–11.9
Transport equipment	Feb.	68.5	3.1	–12.7	Mar.	3,030.0	2.1	–9.6

ratio with the ratio in Column 4 we get another measure of how the 1981-82 recession has affected each county's unemployment picture. Column 7 was calculated by dividing Column 5 by Column 6. Thus a ratio greater than 1 in Column 7 indicates that this recession has hurt that particular county more than the state in general.

Six counties (Gibson, Switzerland, Cass, Madison, Lawrence, and Carroll) have been especially hard hit by this most recent recession. All six have ratios of at least 1.25. That is, their unemployment rate relative to the state's rate has deteriorated significantly in recent months.

Policy attention is often directed toward those areas with the highest unemployment rates. For some areas, unemployment is a chronic problem. Measures that are designed for relief of short-term disequilibrium conditions might be most appropriate in those areas with the greatest divergence of their current unemployment situation from their more long-term condition. Other areas with chronic unemployment problems may have high current rates, but these may be of little difference from the long-term problems of those areas. Short-term efforts in such chronic unemployment areas may only delay long-term solutions.

Frank K. Kushman

INDIANA INDUSTRIAL ELECTRICITY SALES
(Seasonally adjusted in millions of kilowatt hours)

	March 1982	*Feb. 198.*	*March 1981*	*Percent Change From One Month Ago*	*Percent Change From One Year Ago*
Anderson	21.5	27.6	21.1	–22.1	1.9
Bedford	10.9	10.7	15.3	1.9	–28.8
Bloomington	4.6	3.6	3.1	27.7	48.4
Columbus	17.3	17.7	20.4	–2.3	–15.2
Connersville	8.2	8.4	8.8	–2.4	–6.8
Crawfordsville	11.0	12.0	9.6	–8.3	14.6
East Chicago	23.2	23.2	30.6	0.0	–24.2
Elkhart	21.7	22.9	22.6	–5.2	–4.0
Evansville	47.4	45.5	45.2	4.2	4.9
Fort Wayne	42.5	45.2	49.3	–6.0	–13.8
Frankfort	8.1	8.8	7.3	–7.9	10.9
Gary	184.5	188.1	202.3	–1.9	–8.8
Goshen	8.6	8.8	9.0	–2.3	–4.4
Hammond	54.5	51.8	58.4	5.2	–6.7
Huntington	4.5	4.7	5.6	–4.3	–19.6
Indianapolis	338.5	315.8	316.2	7.2	7.1
Jeffersonville	5.6	5.7	6.8	–1.8	–17.6
Kokomo	57.3	59.7	76.0	–4.0	–24.6
Lafayette	36.2	36.4	36.5	–0.5	–0.8
La Porte	14.7	15.0	15.2	–2.0	–3.3
Logansport	7.0	8.0	9.7	–12.5	–27.8
Madison	2.3	2.4	2.5	–4.2	–8.0
Marion	29.2	28.6	30.6	2.1	–4.6
Michigan City	43.3	43.1	44.9	4.6	–3.6
Mishawaka	3.0	4.1	2.7	–26.8	11.1
Muncie	13.4	14.0	21.1	–4.3	–36.5
New Albany	4.4	4.6	4.9	–4.3	–10.2
New Castle	7.7	7.2	8.9	6.9	–13.5
Peru	4.6	5.3	6.2	–13.2	–25.8
Richmond	25.3	22.6	24.3	11.9	4.1
Seymour	2.5	2.7	2.5	–7.4	0.0
South Bend	26.0	28.4	28.7	–8.5	–9.4
Terre Haute	27.5	26.3	32.6	4.6	–15.6
Valparaiso	8.4	8.2	8.1	2.4	3.7
Vincennes	2.9	3.0	3.6	–3.3	–19.4
Wabash	5.6	6.5	7.2	–13.8	–22.2
Indiana	1790.2	1754.4	1937.2	2.0	–7.6

SOURCES: Data provided monthly by public and municipal electric companies.

UNITED STATES – INDIANA BUSINESS INDICATORS*

(Seasonally Adjusted Indexes Unless Otherwise Noted, Base Period: 1967 = 100)

		United States				*Indiana*		
		Latest Month	*Previous Month*	*One Year Ago*		*Latest Month*	*Previous Month*	*One Year Ago*
EMPLOYMENT								
Nonagricultural employment	Mar.	138.0	138.4	138.8	Mar.	115.6	116.4	120.5
Manufacturing employment	Mar.	99.6	100.3	103.8	Mar.	85.6	86.5	92.8
Average weekly hours (no.)†	Mar.	39.1	39.2	39.9	Mar.	39.1	39.4	40.5
Average weekly earnings ($)	Mar.	327.3	326.5	311.2	Mar.	380.4	384.2	372.2
Nonmanufacturing employment	Mar.	154.4	154.6	153.7	Mar.	135.7	136.8	138.9
Unemployment rate (%)	Mar.	9.0	8.8	7.3	Mar.	12.5	12.1	10.3
Unemployment-married males (%)	Mar.	5.5	5.3	4.1	–	–	–	–
Continued unemployment claims	–	–	–	–	Mar.	422.3	357.2	301.2
PRODUCTION								
Bituminous coal production	Feb.	169.0	169.7	172.3	–	–	–	–
Industrial electricity production	Dec.	142.7	143.9	152.4	–	–	–	–
Industrial electricity sales	–	–	–	–	Mar.	154.9	155.9	159.1
Manufacturing production	Mar.	139.7	140.5	151.6	Mar.	137.0	140.2	146.9
Raw steel production	Mar.	70.1	75.3	102.3	Mar.	113.2	115.5	138.5
CONSTRUCTION								
Construction activity-total	Feb.	297.5	300.4	328.5	Mar.	171.2	167.1	235.0
Residential housing starts	Feb.	74.2	69.7	100.7	Mar.	37.4	93.1	72.3
Residential expenditures	Jan.	306.9	313.6	396.6	Mar.	180.0	180.6	317.2
Nonresidential expenditures	Jan.	297.2	299.9	304.1	Mar.	184.3	188.6	235.8
Public expenditures	Feb.	199.2	201.1	238.9	–	–	–	–
Public works and utilities	–	–	–	–	Mar.	118.1	104.4	134.4
OTHER INDICATORS								
Personal income per capita ($)	Feb.	10,869.6	10,810.1	10,117.9	81:3	9,756.0	9,603.0	8,990.0
Passenger car sales (thousands)†	Mar.	777.0	633.0	963.0	Feb.	10.7	8.5	16.2
Year to date (thousands)	Mar.	1,945.0	1,168.0	2,375.0	Feb.	19.2	8.5	29.3

*Current indicators are preliminary and subject to revision

†Not seasonally adjusted

SOURCES: Data on Indiana construction from McGraw-Hill Information Systems Company; Indiana passenger car registration from R.L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

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Morton J. Marcus **Personal Income / 15**

Indiana Regional Reports

In this issue ▪ ▪ ▪

Twice each year we ask economists from communities throughout the state to examine local business conditions. In past years the national and state outlooks statements were offered at the same time. Beginning with this issue, the local area reports will receive separate attention in the June and December issues of the *Indiana Business Review*.

Each report in the following pages suggests the truly difficult times faced by our communities. There is not a bouyant optimism about the future, but rather a grim expectation of continued sluggish performance as the nation slowly emerges from its current economic problems. Despite their collective lack of good cheer, we are indebted to our contributors for their willingness to participate in this semi-annual ritual. The current problems of the state are part of a longer term set of difficulties. The latest personal income data, reported in Indiana's Business, make it clear that today's problems are not novelties.

Editorial oversight: Last month's report on the Indiana economy benefited substantially from the efforts of Cary Harmon whose name should have been associated prominently with our forecast.

Morton J. Marcus,
Editor

INDIANA BUSINESS REVIEW

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INDIANAPOLIS

ROBERT J. KIRK

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If the economic recovery is to be led by consumer spending, then how might the Indianapolis economy be affected? Historically, expenditures for consumer durables such as appliances and cars tend to be postponable during a recession, hence they are the ones that receive the initial stimulus during recovery. Expenditures on consumer durables are based on the age of the stock of durables, the liquid assets and income of households, the age distribution of the population, and interest rates.

In the case of cars, the average age of the stock has lengthened considerably—a positive factor. Household liquid assets in the form of money market funds, cash, and savings accounts have increased—another positive factor. However, there has been a potentially negative factor arising from the age-specific pattern of the rates of change in real incomes of full-time workers. Specifically, the age-group 20-34 has experienced a significantly slower rate of increase in real income than those aged 35 and over. Those in the age-group 20-34 are the post-war baby boomers. The baby boom caused the labor force to grow more rapidly in these age groups, and as a result the change in income of workers in the younger age brackets was less than that of older workers. Thus, although there are relatively many young adults today (a positive factor for consumer durables), their income position may restrict their ability to pay for consumer durables—a negative factor. If a recovery initiated by consumer durables is to materialize, it may have to rely primarily on the willingness *and ability* to spend by the older workers.

What about interest rates? The combination of rising private credit demand and limited saving for *private* investment will result in continued pressure on real interest rates for the remainder of the year. Built into these relatively high real interest rates is uncertainty arising from future corporate financial instability. Therefore, continued pressure on interest rates will be a negative factor in the recovery of interest rate-sensitive expenditures including consumer durables. In summary, our scorecard lists both positive and negative factors in the evaluation of the strength of the durable goods recovery. Since Indianapolis has significant employment in durable goods production, one must be cautious about the recovery's strength.

COMPETITIVENESS OF THE INDIANAPOLIS ECONOMY

Some demand-side dimensions of the recovery have been examined. What about the supply side? Since a recovery will affect different regions of the economy differently due to different industry mixes and degrees of competitiveness of local firms, how might Indianapolis fare?

What has been the record? Table 1 shows changes in employment nationally and locally over recent business cycles. Employment change is measured by index numbers with the level of employment in November 1973 (business cycle peak), set equal to 100. Therefore, in Table 1, the 112.8 rating for Indianapolis in March 1982 means that the change in employment since November 1973 has been 12.8 percent.

The Indianapolis economy performed like the U.S. economy by not contracting as much as the rest of Indiana in the 1975 trough, and then extending the recovery to the national peak in January 1980 while Indiana peaked in March 1979. In the current recession, Indianapolis has contracted less severely than the rest of the state but somewhat more severely than the U.S., using the U.S. peak for comparison. If we assume the March 1982 data are near the current recession's trough, then in a trough-to-trough comparison, Indianapolis has compared favorably with the U.S. in total employment. However, in manufacturing and specifically in autos and parts, Indianapolis has fared less well.

Recessions are times when firms concentrate their production at their more efficient locations if possible. Therefore, it is useful to compare the competitive position of the manufacturing sector of Indianapolis with other metropolitan areas in the region. Table 2 shows the gross profit margin, a measure of competitiveness, for selected metropolitan areas.

Since the data in Table 2 are not adjusted for differences in industry mix among metropolitan areas, it is more meaningful to examine changes over time for each metropolitan area assuming that changes in industrial mix were minimal. Indianapolis improved its relative competitiveness slightly while the rest of Indiana declined.

Because Detroit, Indianapolis, and the rest of Indiana are heavily dependent on the motor vehicle parts industry (SIC 3714), it is interesting to examine its competitive position among other manufacturing industries. In Table 3, the motor vehicle parts industry is compared to all manufacturing in selected years in terms of wage rates, labor productivity, and gross profit margin.

Relative to all manufacturing, the measures of competitiveness for the motor vehicle parts industry showed deterioration over the period. The problems facing the industry did not begin in 1979!

How well has Indiana (Indianapolis data were not available) fared compared to other states in which significant employment in motor vehicle parts exists? Table 4 provides the gross profit margin for selected states.

The first three states dominate the industry but their shares of U.S. value added declined over the period. The latter three had relatively significant shares of U.S. value added and increased their shares over the period. Regression analysis of interstate differentials in gross profit margins indicates a negative relationship between gross profit margin and the wage rate, and a positive relationship between gross profit margin and labor productivity. Recent wage concessions and efforts to improve labor productivity are steps in the right direction.

Table 1

EMPLOYMENT INDEXES FOR THE UNITED STATES, INDIANAPOLIS, AND REST OF INDIANA AT SELECTED POINTS IN THE BUSINESS CYCLE
(November 1973 = 100)

Geographic Area	*Trough 3/75*	*Peak in Indiana 3/79*	*Peak in U.S. 1/80*	*Most Recent 3/82*	*Trough to Trough 3/75-3/82*
Total Establishment Empl.					
United States	98.3	114.2	116.9	114.8	+16.5
Indianapolis	97.4	115.8	117.1	112.8	+15.4
Rest of Indiana	94.8	110.0	105.8	97.0	+2.2
Manufacturing Employment					
United States	90.6	103.6	103.2	94.1	+3.5
Indianapolis	90.1	102.2	96.9	88.7	−1.4
Rest of Indiana	84.6	99.6	90.5	79.4	−5.2
Autos and Parts Employment					
United States	79.5	107.5	85.9	66.2	−13.3
Indianapolis	76.3	106.3	73.2	55.8	−20.5
Rest of Indiana	77.3	101.2	70.0	59.5	−17.8

SHIFTING THE ECONOMIC BASE

Attention has been focused on the existing economic base. What about introducing new kinds of activity into the economic base? Since 1954, the information occupations have become the largest sector of the U.S. labor force. Information workers are those concerned primarily with symbol-processing activities, as opposed to those engaged in the production or distribution of physical goods or services. Information workers include knowledge producers and distributors (scientific and technical workers, educators, and communication workers), market search and coordination specialists (insurance adjusters, sales representatives), and information processors and machine workers (computer equipment operators, bank tellers, stenographers). Much of the employment base of Indianapolis consists of information workers.

A dimension of the information occupations is employment in administrative offices and auxiliaries in manufacturing. Employees in administrative offices include those involved in program planning, company purchasing, company financial policy and accounting, general engineering, corporate personnel matters, and legal affairs. Employees in auxiliary units include research and development organizations, purchasing offices, and sales promotion offices that serve plants or central management.

I have examined trends and location determinants of administrative office employment in manufacturing. Both production and administrative employment are market-oriented (measured by personal income shifts among areas), and have become more so in recent years. I have examined factors affecting the location of administrative office employment, such as the location of production employment, personal taxes for a $50,000 income household (considered to be a factor in attracting technical people for R and D), disamenities of large urban areas, and climate. Only the location of production employment was significant. The tax, disamenities, and climate variables had the predicted signs but were not statistically significant. The $60 million Eli Lilly research laboratory to begin construction this fall in Indianapolis and the announced move of Texscan executives to Phoenix to be closer to manufacturing facilities in the Southwest are consistent with my analysis. In addition, analysis of population change among metropolitan areas indicates that it is related to the avoidance of disamenities of very large metropolitan areas and the attraction of moderate climates and areas with relatively low taxes for higher income households.

Table 2

GROSS PROFIT MARGIN IN MANUFACTURING, 1967, 1977, AND CHANGE 1967-77, BY SELECTED METROPOLITAN AREAS

Metropolitan Area	*1967 (U.S. = 100)*	*1977 (U.S. = 100)*	*Change 1967-1977*
Chicago	97.1	98.6	1.5
Indianapolis	95.6	97.3	1.7
Louisville	120.2	106.5	−13.7
Detroit	64.5	59.4	−5.1
St. Louis	78.9	81.6	2.7
Cincinnati	106.5	109.1	2.6
Columbus OH	100.1	108.7	8.6
Dayton	111.0	97.2	−12.8
Rest of Indiana	97.6	92.4	−5.2

Gross profit margin = (value added-payroll)/value of shipments.
SOURCE: U.S. Census of Manufacturers, selected years.

Table 3

MEASURES OF COMPETITIVENESS FOR MOTOR VEHICLE PARTS INDUSTRY (SIC 3714) IN SELECTED YEARS (All Manufacturing = 100)

Measure of Competitiveness	*1967*	*1972*	*1977*
Wage rate	126	132	137
Labor productivity	100	99	95
Gross profit margin	98	97	91

Wage rate = wages paid to production workers/number of production worker hours.
Labor productivity = value added/number of production worker hours.
Gross profit margin = (value added-payroll)/value of shipments.
SOURCE: U.S. Census of Manufacturers, selected years.

Table 4

GROSS PROFIT MARGIN FOR THE MOTOR VEHICLE PARTS INDUSTRY (SIC 3714) IN SELECTED YEARS AND STATES (United States = 100)

State	*1967*	*1972*	*1977*
Ohio	99	94	101
Indiana	n.a.	92	88
Michigan	96	97	86
North Carolina	152	172	162
Tennessee	n.a.	154	145
California	85	124	116

n.a. = not available.

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MUNCIE–ANDERSON

ROBERT R. JOST

Professor of Economics, Ball State University

As of the end of May, the mix of economic indicators suggests that the nation's economy remains rolling in a trough that lends substantial credence to the I.U. forecast of zero growth in real GNP for the second quarter of 1982. It should be noted that the moderate recovery forecast by I.U. for the latter half of 1982 assumes a further decline in interest rates for the balance of 1982. Given the fragility of financial institutions today, the fragility of private credit demanders, and the impending extraordinary demands for credit by the federal government, this assumption appears tenuous to say the least.

The current slump, which represents the second phase of a double dip recession which commenced in 1980, has impacted severely on the Muncie-Anderson SMSAs. In the December 1981 *IBR* this analyst forecast that unemployment in the Muncie-Anderson area would "continue its tortuous decent through the first quarter of 1982." During this first quarter Muncie and Anderson again received national publicity by being ranked among the top ten standard metropolitan statistical areas in unemployment in the United States. Seasonally adjusted unemployment figures for the two respective areas appear quite similar for the first third of 1982 with April registering a reduction in unemployment in both areas.

Unemployment Figures

1982	*Muncie*	*Anderson*
January	15.8%	19.5%
February	18.5%	20.1%
March	17.0%	20.3%
April	16.0%	19.1%

Given the present uncertainities of the nation's economy, it would be premature to imply from the April unemployment reductions that the local economies had resumed an upward cyclical thrust. Monthly unemployment data not only suffers many methodological shortcomings, but frequently masks significant underlying trends in a local economy. For example, measured employment over a longer time span reveals that employment in the Muncie SMSA declined from 54,900 in December of 1977 to 48,100 in April of 1982—a decline of 12.4 percent. Employment in the Anderson SMSA, which measured 59,300 in December of 1977, shrunk to 44,600 by April 1982—a whopping 25 percent decline. Not only has the relative decline in employment in Anderson doubled the incidence experienced by Muncie, but Muncie's employment now exceeds Anderson's by 3,500 workers—almost equivalent to Anderson's lead over Muncie 4½ years earlier. Of course much of the differential in the relative rate of decline in employment in the two SMSAs can be attributed to the much greater dominance of GM auto production in the Anderson economy. One might logically expect employment declines of such magnitudes to be paralleled by income declines, and it comes as no surprise that Anderson was ranked among 10 other U.S. cities as having experienced the lowest increase in current dollar personal income in 1980.

Over time such employment and earnings declines are likely to be reflected in demographic changes. Between 1970 and 1980, the population of Delaware County (Muncie SMSA) decreased 0.5 percent and Madison County (Anderson SMSA) increased a minuscule 0.6 percent in sharp contrast to the state's 5.7 percent increase, which in turn, was roughly half the growth rate experienced by the nation. The State Board of Health has conservatively estimated net migration at 90,000 during this decade, of which a disproportionally large number (18,600) are attributed to Delaware and Madison counties. A mid-1981 estimate of net migration in the early eighties found the trend to be accelerating and it could well be that Muncie and Anderson will continue to be associated with a disproportionate share of the exodus. School enrollment data tend to dovetail with this assumption, for first and second grade enrollment in Delaware County for the 1980-81 school year totaled 3,111, and that same group of students, second and third graders in the 1981-82 school year totaled only 2,944—a decline of nearly 5.4 percent.

Housing statistics supplied by Frederick Miltenberger & Associates for the 1978-82 time frame are equally distressing:

Deed Recordings in Delaware County

1978	4,949	–20.8%
1979	3,919	–12.0%
1980	3,450	–19.0%
1981	2,765	

The 461 deeds recorded during the first quarter of 1982 were 23 percent below those of the first quarter of 1981. The 130 new single family houses completed in the Muncie SMSA in all of 1981 was the lowest level in over a decade and represented only 28 percent of the 1978 number. 1982 single family completions will probably be even lower as high mortgage rates continue to deter prospective buyers. On the other hand, multiple family housing completions in Muncie, lumping together those financed privately with government subsidized units, experienced a sharp freshet in 1981. They should do less well in 1982. The vacancy rate, however, which has been relatively stable the last few years may well be in the throes of moving significantly upward in 1982.

Business is languishing for many of the numerous small machine tool shops situated in the Muncie-Anderson SMSAs. Owners report that their order backlogs have virtually vanished, that they do business on a day-to-day basis with reduced employment, and they offer little optimism with respect to a near term turnaround.

The latest reading of the Muncie Business Index (March 1982) registered a meager 109.44 over its 1967 base of 100. This reading was 10.4 percent lower than

March 1981—hardly symptomatic of a vigorous economy.

What is ahead for the Muncie-Anderson economies for the balance of 1982? As autos and housing have traditionally provided much of the main thrust in previous recoveries from recession, the continuing weakness of these key sectors is most disconcerting. Although there have been some callbacks of auto workers in Muncie and Anderson during March and April, as reflected in the previously cited unemployment data, it will require a sustained upturn in domestic auto sales even to partially alleviate the depressed economic conditions in the area. Over the last three years the rate of growth of cars in private use has dropped well below its historical trend line as consumers had to spend an increasing share of their incomes for energy and housing services. As a consequence, the average age of the cars has risen, and it seems likely that some pent-up demand will be felt in the market place, given the improving financial position of the consumer. Nevertheless, with the problems confronting the U.S. auto industry, it remains to be seen whether it has the ability to compete in price and quality with foreign imports. G.M.'s decision to replace its Chevrolet Chevette line with a Japanese produced sub-compact appears to be an admission that even with a favorable labor contract, it cannot compete in the building of subcompacts. The 1980s are not likely to witness a return of the U.S. auto industry to its preeminent position in the American economy; the degree of dependency of Muncie-Anderson upon auto production will continue to decline.

FORT WAYNE

THOMAS L. GUTHRIE

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The thrust of the initial (December 1981, *IBR*) economic forecast for the Fort Wayne area economy for 1982 remains intact: "Employment is expected to trend downward through the second quarter of 1982 before turning upward." As forecasted, the spurt in area employment during the third quarter last year was short-lived. Not only did the economy relinquish the approximately 2,500 jobs gained during that quarter, but it has given up an additional 5,500 jobs since then. As of April 1982, total wage and salaried employment in the Fort Wayne SMSA (Adams, Allen, DeKalb and Wells Counties) is a seasonally adjusted 164,400. In March 1979 employment peaked at 185,300; thus the area economy has relinquished almost 21,000 jobs in three years—an 11.3 percent contraction. During the same three year period, unemployment has more than tripled from 4.1 to 13.2 percent (seasonally adjusted) as the local economy became "unhitched" from the national economy.

Sixty-five percent of the decreased employment has occurred in the durable goods portion of the manufacturing sector, although durable goods accounted for only 28 percent of area employment in March 1979.

Eight thousand of the 12,900 jobs lost in durable goods manufacturing occurred in the transportation equipment industry. International Harvester's particular travails are well documented; however, the entire heavy duty truck industry has been in a slide since the beginning of 1979—which coincides with the slide in the area economy. International Harvester's market share for heavy duty trucks has varied substantially during this same period, rising from a post-strike depressed level of 24 percent in the third quarter of 1980 to a high of 33 percent near the end of 1981, before easing to 28 percent currently.

The sectors of likely strength and weakness for 1982 outlined in the original forecast also remain intact. Electrical machinery employment will continue to grow primarily as a result of the recent growth in Federal defense expenditures. Of the 20 industries tracked in area employment, electrical machinery and health services were the only two having increased employment in the last year. Transportation equipment, contract construction and government have been among the weakest industries and will remain so through year-end. As the national economy recovers in the last half of 1982, it will create turnaround situations locally in the nondurable goods sector, and the finance, insurance, and real estate industries. Wholesale and retail trade will exhibit strength, especially near year-end since 1982 Christmas sales will be strong.

Currently, the original forecast of 1982 single family new housing construction in Allen County appears almost euphoric. Through May, 58 building permits have been issued; thus the original forecast of 500-600 starts is unrealistic. The dual prerequisites of forecasting mortgage rates and determining the substantial inventory of existing housing for sale make new construction forecasting extremely difficult. Hopefully, a forecasted pickup in construction this fall will bring starts for the year into the 300 range. This will be the third consecutive year activity has been below a thousand, starkly contrasting with the nine previous years which were all above a thousand.

The summary is a repeat from the December 1981, *IBR*: "The Fort Wayne area economy is forecast to have nominal growth in 1982, but the direction at year-end will be distinctly upbeat."

GARY-HAMMOND
EAST CHICAGO
(Calumet Area)

LESLIE P. SINGER

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As so many of our peers have done, we too underestimated the depth, though not the timing, of the current recession. As reported by local papers in November 1981, the Northwest Indiana Econometric model predicted a regional lower turning point in the third quarter of 1982. More recent analysis appears to confirm earlier predictions; signals now, however, are less clear. For example, the real money indicators turned around in the third quarter of 1981 projecting, with a 9-11 months lead, an August to September 1982 upturn. On the other hand, net change in inventories, change in liquid assets, and other intermediate indicators are continuing their descent. Autos, various investment series, etc., which are the driving variables of our model, are not expected to reach their pre-recession peaks until the end of 1983 or the beginning of 1984.

Table 1 gives the latest forecast. The principal conclusions are that this region appears to be in a shallow cycle, which will leave the local economy's index of overall business activity considerably shy of its May 1979 peak for most of 1982 and even 1983. As a matter of fact, if we take March 1981 as the local upper turning point of the mini-cycle of 1980-81, we estimate that the level of May 1981 will not be attained by the local economy until about August or September of 1982. One has to note that the 1981 recovery from the 1980 downturn was incomplete; it failed to recoup over 50 percent of the jobs which were lost during the 1979-80 downturn.

Table 1

NORTHWEST INDIANA DATA

	Actual		*Forecast in 1000, Annual Rates*		
	1982 March	*1982 June*	*1982 Sept.*	*1982 Dec.*	*1983 March*
Total Employment	238.4	242.1	243.8	244.9	252.2
Manufacturing--Plus Construction	96.1	100.4	100.96	102.05	107.5
Steel Employment	56.9	57.1	56.2	55.9	61.8
Nonmanufacturing (Excluding construction and excluding government.)	110.9	113.3	111.9	116.4	115.5
Government Employment	31.4	32.1	32.4	31.9	31.0
	Actual		*Forecast in Billions of Dollars*		
Annual Payroll of Manufacturing & Construction	$2.735	$2.813	$2.931	$3.012	$3.141
Steel Wages	$1.653	$1.762	$1.881	$1.851	$1.941
Nonmanufacturing Wages, (Excluding construction and government.)	$1.445	$1.495	$1.513	$1.501	$1.496
Government Wages (estimated)	$.653	$.659	$.683	$.674	$.699
Total Wage Bill	$4.833	$4.967	$5.127	$5.187	$5.336
Real Index of Business Activity (May 1979 = 100)	88.3	89.9	91.1	91.5	92.8

Table 2

COMPARATIVE GROWTH RATES

	May 1970	*May 1975*	*May 1977*	*May 1979*	*May* 1982*
Total Establishment Employment (000)	224.9	231.3	248.5	263.6	238.4
Percent Change	–	2.85%	5.92%	6.07%	–9.56%
Other Manufacturing Employment (000)	41.7	35.0	37.1	37.9	26.0
Percent Change	–	–16.06%	+1.06%	+2.15%	–31.39%
Steel Employment (000)	66.2	60.8	64.6	68.3	56.9
Percent Change	–	–8.15%	–6.25%	+5.72%	–16.69%

*Estimated

The significance of the current projection is that, if correct, the local economy's overall performance will remain below the 1979 peak for at least two years. Moreover, there are fears that the rebound will be incomplete, causing a quasi-permanent underutilization of both human and physical resources. There are some indications—and we hope we are wrong—that Lake County as a whole, unlike Porter County, will complete most of the 1980-1990 decade as an industrially stagnant region.

There are fundamental reasons why the local economy is likely to be less vibrant than some other regions of the country. There is in progress a global retrenchment of heavy industry in the Benelux countries, England, France, as well as in the U.S. Accelerating labor costs, rising energy prices, faltering human resource management, unpredictably volatile interest rates and a gradual shift in consumer tastes away from goods absorbing large quantities of steel, may force the industrial giants to operate and expand only the more profitable capital installations. In some respects, the U.S. is less flexible than our European competitors. Steel, for example, had obsolete plants operated by their best and most experienced human resources along with more advanced plants operated by less experienced and often insufficiently motivated human resources. The higher fixed asset holdings (homes, etc.) of the wealthier American steel worker makes for a less mobile labor force which is more apt to apply political pressure to retard the necessary restructuring of the industrial base (steel, autos, etc.).

The Northwest Indiana Region is experiencing its worst liquidity crunch of the decade, partly as a result of commercial and residential overexpansion. We are not well poised for a period of disinflation, however short-lived it may turn out to be. Recent entrepreneurship in Black and Latin urban quarters is in considerable danger of failure if the progress of the recovery remains slow and shallow, as is our current prognosis.

New and expanding firms in non-urban Northwest Indiana will continue to be reluctant to hire high risk employees from the labor-surplus centers, causing further deterioration and slower recovery in urban Lake County. We predict continued relatively high unemployment for most urban centers through 1983. Government programs such as CETA, which perpetuated bad work habits and an attitude of dependency, have unintentionally expanded the core of high-risk labor which, in a shallow recovery, will continue to undermine urban growth.

Progress in Northwest Indiana depends on the ability of steel, the principal export sector, to attract high-wage, steel-related processing firms, whose payrolls fuel the commercial, financial and service sectors of the regional economy. Table 2 provides some comparative growth rates for area steel and other manufacturing. The dramatic decline in other steel-related manufacturing jobs suggests a dwindling role of local steel as an industrial magnet.

If, as expected, monetary markets stabilize in 1983-84, and a more realistic bargaining stance is taken by steel and auto workers, capital goods industries may revive, and this region may enter a new and possibly robust phase of growth in 1983-84 and beyond.

RICHMOND

ASHTON I. VERAMALLAY

Assistant Professor of Business and Economics, Indiana University East

The national recession continues to afflict the Richmond area economy. Industrial recalls of unemployed workers are slow and erratic. If this trend continues the unemployment rate will remain relatively high since one out of every two jobs in the local area is in manufacturing. The current unemployment rate is about 15 percent.

The building trades and automotive outlets, in particular, are being affected by high interest rates and weak consumer demand for their respective products. Fewer people are buying new cars every two or three years. Some consumers are deferring purchases because they can realize high interest income in money market certificates. Also, many people, because of job uncertainty, are afraid to make long-term financial commitments in housing and automobiles.

Retail sales, however, are likely to perk up when the additional 10 percent personal income tax cut becomes effective in July. As consumers release their pent-up demands for durable goods the local economy can expect some positive impacts. Such impacts, aided by the drop in the inflation rate, can eventually brighten the employment outlook for the rest of the year.

A caveat is in order at this point. At present there is an industrial dispute between the local PRC recording company plant and the International Brotherhood of Electrical Workers (IBEW) Local 2043 over wage contracts. If other unions join the IBEW in solidarity, this will disrupt the local economy. It may retard the hoped-for local recovery.

SOUTH BEND

ELKHART

DAVID X. KOLK

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OVERVIEW

The regional economy continued to deteriorate during the first half of 1982, with manufacturing employment leading the decline. Total employment in the South Bend SMSA has fallen from a peak in May 1979 of 120,000 to 105,000 in January 1982. Total employment in the Elkhart SMSA has fallen from a peak in April 1978 of 82,500 to 66,500 in January 1982. The slide in total employment reflects the impact of the downturn in the transportation sector that began in mid-1979 and the general weakening of the national economy.

The second half of 1982 does not promise any significant improvement in the overall employment picture. The manufacturing and construction sectors in both regions will continue to be weak, with the nonmanufacturing sectors remaining flat.

ST. JOSEPH COUNTY

Total employment in St. Joseph County has declined 12.5 percent since its 1979 peak (see Figure 1). The decline in manufacturing employment accounts for the largest proportion of the total employment decline. Construction related employment has declined by almost 50 percent in the last three years (from 6,500 to 3,800), due to the virtual collapse of residental construction. Nonmanufacturing employment, while projected to decline in 1982, has been increasing in the last half of 1981. The behavior of these major employment components reflect the changing composi-

Figure 1

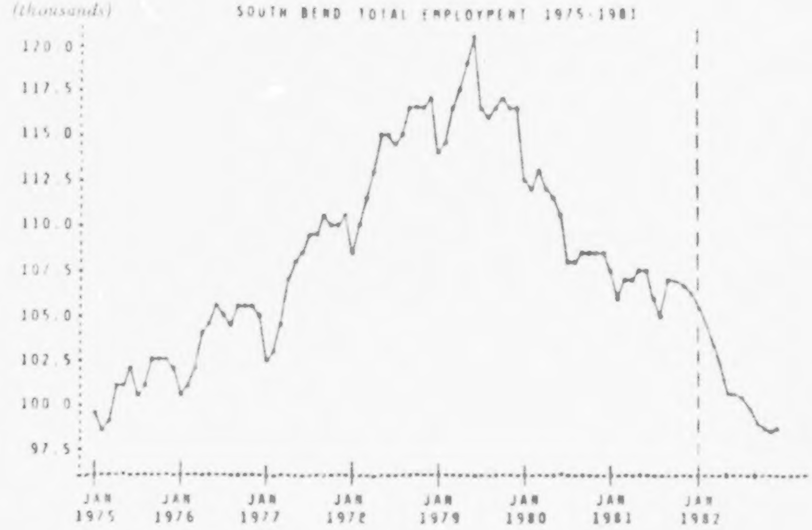
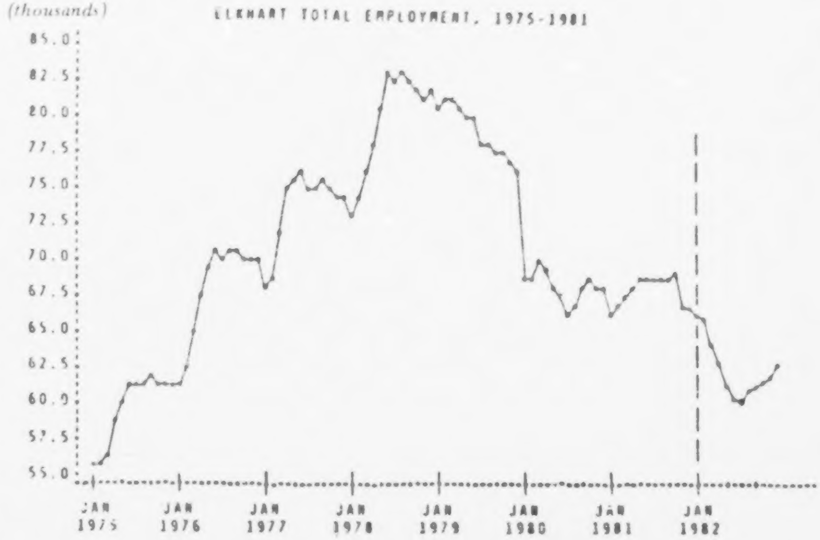


Figure 2



tion of the St. Joseph County economy, which is shifting away from a manufacturing oriented employment base towards a service oriented employment base.

An employment forecasting model of the region, still in the early stages of construction, was used to prepare forecasts of the regional economy. The results indicate that even if the national economy begins to improve in the third quarter, the effects will not be felt in South Bend until the fourth quarter. The primary reason for the lag is the depressed state of the automobile industry. It takes three to four months for changes in automobile sales to fully have an impact on St. Joseph County. Domestic sales have continued to decline; and while industry analysts predict auto sales will improve once the national economic picture brightens, the effects of higher auto sales will take longer than usual to improve the employment situation in St. Joseph County.

Nonmanufacturing employment will continue to be flat, with perhaps a small decline due to interactions with the manufacturing sector. Construction employment will continue to decline. Any seasonal effects will be small.

There are some possible bright spots in the St. Joseph economy. The ability of AM General to compete successfully for government contracts will provide 250-500 manufacturing jobs and another 250-500 nonmanufacturing positions. The South Bend ethanol plant will soon enter the construction phase and will provide some needed construction jobs. But these are two bright spots in an otherwise poor employment outlook.

ELKHART COUNTY

Total employment in Elkhart has fallen by 20 percent since its peak in 1978. The reliance of the Elkhart economy on the recreation vehicle industry hurt the region in the late 1970s, but the decline in gasoline prices has spurred the industry, giving the area a brief employment upturn (see Figure 2). Nonmanufacturing employment has remained stable in Elkhart, with construction and manufacturing sectors responsible for the cyclic employment behavior.

The prospects for the rest of 1982 show no significant improvement. Manufacturing employment should increase, lagging the national recovery. Nonmanufacturing employment will turn up with the national economy. Construction employment is expected to remain low, with no seasonal upturn.

SUMMARY

A return to the economic prosperity of the mid-1970s seems a few years away. The St. Joseph-Elkhart region is heavily dependent on manufacturing in the slower growing sectors of the national economy. Price stability, lower energy prices and lower interest rates will help stabilize the regional economy. It will take a redevelopment program that lessens the area's dependence on traditional manufacturing sectors to ensure another period of sustained economic growth.

KOKOMO

DILIP PENDSE

Assistant Professor of Economics, Indiana University at Kokomo

Forecasting economic trends in North Central Indiana has become more difficult than solving Rubik's Cube! With the way the national economy is performing, I am somewhat pessimistic about the duration and the strength of such economic recovery.

In Kokomo and Marion the unemployment rates have remained in the middle to upper teens for several months now. Although the Fisher Body, General Tire, and RCA plants, Marion's three major employers, have recalled many laid-off workers, many more still remain jobless. Nearly 50 percent of the hourly workers at Marion's Dana plant are without jobs. In Kokomo, nearly 1600 workers, or 14 percent of the normal work force at Delco Electronics, Kokomo's largest employer, are on indefinite layoffs. Many laid-off workers at the Cabot, Continental Steel, and Chrysler plants in Kokomo have not yet been called back to work.

The housing sector also is not doing well. Data on home sales, building permits issued, and the demand for home mortgage and home improvement loans in Kokomo during the first quarter of 1982 suggest that Kokomo's longest and roughest economic ride since the 1973-75 recession is not yet over. High interest rates have aborted any upturn in the housing sector.

North Central Indiana's economy is closely tied to the national trends in the manufacturing sector in general, and the auto sector in particular. However, as of this writing, I have not seen strong, hopeful signs suggesting a "robust" upturn in either sector at the national level. The tax cut in July will certainly help stimulate the economy. However, not much of the new take-home money will be likely to go into purchase of new automobiles. In other words, the tax cut will not be of much benefit to the auto sector. Because of this and prevailing high interest rates, any recovery in the auto sector is likely to be unspectacular. The interest rate deadlock has all but stalled household spending on big ticket items and homes.

In conclusion, the forecast for the remaining six months of 1982 is not cheerful. The overall economic recovery will be moderate. The housing sector will not show much vigor. The bright spots I see are in segments of the retail sector, because of improved real take-home income.

EVANSVILLE

MAURICE TSAI

Professor of Economics, University of Evansville

The Evansville economy began 1981 with a rather strong performance, but in the second quarter it entered the 1981-82 recession by posting a 5.7 percent decline to 102.13 as measured by the Evansville Area Business Index (see Table 1). The Index edged upward in the third quarter by 3.4 percent, but it slipped again by 1.5 percent in the fourth quarter. The declining trend continued in the first quarter of 1982 when the Index was lowered to 102.80. The lowest point was January 1982 (101.56), which was comparable to the lowest months (June and July) of the 1980 recession. From January to March, the Index did rise to 104.46, but the state of the regional economy in the second quarter is sluggish. Nationally, the second quarter is expected to be the trough of the 1981-82 recession, so a tremendous upward movement is unlikely for the Evansville region.

For various sectors of the Evansville economy, some new developments can be observed, but most sectors maintain a declining tendency as expected in a recessionary period. The local industrial production index reached its lowest level in the second quarter of 1981 and since then recovered by about 6 percent by the end of the first quarter of 1982. Weak consumer buying nationally, especially in durable goods, and low housing construction accounted for the weakness in manufacturing activities. Still this sector was not hit as hard as other regions in Indiana which rely even more heavily on the automotive industry.

The retail trade sector improved in the third quarter of 1981 by about 2.5 percent when the Eastland Mall was opened. Since then retail activities dropped by about 1.3 percent through the first quarter of 1982. High unemployment and high interest rates worked together against the improvement of retail trade, especially in local automobile sales. The sales of new cars and trucks has been less than half of the 1977 level in the last two quarters.

Residential construction has been in its third year of depression. Locally the level of activity reached a new low in January and February 1982 at about 15 percent of its 1977 activity level. Some improvement was observed in March when the activity level rose to 30 percent of the 1977 level. Recent financial assistance to the housing industry by the state government, and federal assistance bills in the Congress are badly needed by this sector. One new adverse development in the first quarter of 1982 was the significant weakening in business construction, which had remained robust during the 1980 recession. Business construction declined by 15 percent during the first quarter and may remain low for the second quarter this year. Together these effects explain how the Construction Index slipped below the 1977 level for the first time in four years.

Another new development in the first quarter was the beginning of some recovery for the financial sector. This sector, after two years of decline, showed signs of a turnaround in February and March. Certain portions of the financial sector may have overcome a critical stage and moved toward improved conditions.

At this time (June 1982), the only encouraging factors in the Evansville economy are the sustained activities in the manufacturing sector and a seemingly improved financial sector. It is still likely that the national and regional economies will begin their slow recovery in the second half of this year. At this stage, the inflationary threat seems to be under control (six percent this year), and the interest rate may go down by one or two points by the end of this year if most of the uncertainty about the near-future economy is removed. In short, a slow recovery in the second half remains very likely if no new adverse factors emerge.

Table 1

EVANSVILLE AREA BUSINESS INDEX
(Revised; 1977 = 100)

Period	*Industrial Production*	*Trade & Services*	*Construction*	*Transportation*	*Finance*	*Employment*	*Composite Index*
			Monthly Index				
1981 Sept.	110.60	104.14	99.71	93.43	96.68	105.91	105.55
1981 Oct.	112.85	100.96	103.16	96.08	96.91	105.62	105.53
1981 Nov.	104.33	101.25	105.57	97.73	93.74	105.46	102.68
1981 Dec.	107.73	103.15	97.97	95.54	98.13	106.12	103.94
1982 Jan.	103.44	101.86	91.73	98.93	99.03	104.80	101.56
1982 Feb.	108.99	101.05	86.58	94.62	101.86	103.51	102.39
1982 Mar.	112.29	101.73	94.05	94.08	103.99	103.49	104.46
			Quarterly Index				
1981 I	114.55	103.72	113.74	102.36	100.10	105.99	108.30
1981 II	102.09	100.61	108.55	98.88	97.27	105.02	102.13
1981 III	110.37	103.01	106.00	97.68	97.37	105.96	105.59
1981 IV	108.30	101.79	102.23	96.45	96.26	105.73	104.00
1982 I	108.24	101.55	90.79	95.88	101.63	103.93	102.80

JEFFERSONVILLE-NEW ALBANY (Louisville Area)

FAY ROSS GRECKEL

Professor of Economics, Indiana University Southeast

The 1981-82 recession is still very much in evidence in the five-county Louisville metropolitan area. After a sluggish but fairly stable performance during the first nine months of 1981, economic conditions deteriorated rather sharply in the final quarter of the year. Although some sectors have since showed modest improvement, much of the economy remains at or below its depressed year-end level.

As is true nationally, the worsening economic conditions have spread beyond the housing and auto-related sectors. Nevertheless, these are still the hardest-hit areas, followed by other manufacturing industries and government sector employment.

Some of these developments are indicated in Table 1. The industrial production index fell sharply in late 1981, reaching a low of 98.1 for the fourth quarter. After a slight rebound during the first quarter of this year, it fell again to 97.6 in April. Comparing today's index with pre-recession levels, we observe the index declining from 125.5 in the first quarter of 1979 to 102.3 in the first quarter of 1982.

The construction index also plummeted from an average of 128.2 for the first nine months of 1981 to a 102.8 average in the succeeding seven months. This contrasts with a 150.6 average for 1979. High interest rates are keeping both construction and real estate severely depressed. Construction employment, which reached a peak of 22,300 workers in the summer of 1979, was only 16,500 this April.

Single family homebuilding is a rare activity these days. In 1981 only 600 single family units were begun in Jefferson County (including Louisville), Kentucky; during each of the preceding nine years from two to six times as many houses were built. Some multifamily residential construction, including condominiums, is underway, along with considerable repairing and remodeling. Work continues on the Galleria and several other large downtown Louisville projects. New Albany is beginning to develop its riverfront area for public recreation purposes, and in Clark County construction of the oft-postponed riverport, the Clark Maritime Center, is finally starting.

In 1981 the local economy was buoyed somewhat by an encouraging amount of industrial and commercial expansion. At least 330 enterprises announced or undertook expansion projects totaling an estimated $395,000,000 in planned investment. When completed, these various projects could add some 9,000 jobs to the local labor market. This planned expansion included more than new construction. Conversion of the Ford LTD plant to Ranger truck production accounted for a substantial portion of the investment total. The welcome start-up of the new assembly line in January meant the recovery of some of the Ford production jobs lost over previous months and years and should not really be viewed as a net addition of jobs.

Automobile sales remain weak. In 1981 the number of cars sold in Jefferson, Clark, and Floyd Counties was 4 percent below the poor 1980 levels. The current year began in even worse shape, with first quarter car sales 24 percent lower than in the first quarter of 1981. Sales improved in April, helping to boost the trade and services index slightly above its 1980 and 1981 levels.

Metropolitan area employment continues to decline (see Table 2). The 376,000 jobs held during the first quarter of 1982 in enterprises located within the five-county metropolitan area was 9,000 jobs less than were recorded in the first quarter of 1981, and 19,000 below the 1979 first quarter total. Instead of the usual seasonal rise in the early spring, April's employment level fell below 370,000, and the unemployment rate for area residents rose to a seasonally adjusted

Table 1

ECONOMIC INDEXES, LOUISVILLE METROPOLITAN AREA, 1979-1982
(Seasonally adjusted; 1967 = 100)

Annual Averages	*Industrial Production Index*	*Trade & Services Index*	*Construction Index*	*Financial Index*
1979	120.7	150.1	150.6	365.2
1980	107.1	141.1	122.8	390.2
1981	105.8	142.7	122.3	401.0
Quarterly Averages				
1981:				
Q1	107.3	148.8	130.2	388.3
Q2	111.6	141.7	131.2	381.1
Q3	106.1	141.6	123.3	393.7
Q4	98.1	138.7	104.4	440.8
1982:				
Q1	102.3	141.1	103.2	442.7
Apr.	97.6	143.2	97.1	427.8

SOURCE: Research Department, Louisville Area Chamber of Commerce.

13.4 percent. The unadjusted rate was 11.8 percent. However, if the Ford Ranger plant had not closed for a week due to a parts shortage, the unemployment rate for April would have been 12.6 percent rather than 13.4 percent.

Employment in April was 17,600 jobs lower than in April 1981. Firms manufacturing machinery or transportation equipment (including GE, Ford, and Jeffboat) accounted for more than half of this difference. The other major category of job loss was in government employment, which showed a decline of 4,600 jobs.

Employment in firms located in Clark and Floyd Counties remained fairly steady through most of 1981, but during the fourth quarter jobs in those two Indiana counties also declined. Employment for the first quarter of 1982 was 4,000 jobs lower that it had been a year earlier—nearly a 10 percent reduction. As in the metropolitan area as a whole, almost all of the decline was in durable goods manufacturing or government sector jobs. By April the unemployment rate for residents of the two Indiana counties reached a seasonally adjusted 14.8 percent.

Looking ahead, on the positive side we have continued downtown-Louisville revitalization, as well as some of the other expansion projects noted above; a steady or modestly rising level of consumer spending; and the likelihood of seasonal gains in employment. Among the negative considerations are the shaky financial status of International Harvester, the lack of private sector jobs for workers affected by government sector cutbacks, and the cumulative effects of continued high interest rates and recession. Since the most pervasive problems are in interest-sensitive industries, substantial relief on the local level depends upon national economic improvements that result in falling interest rates. Consequently it is difficult to foresee more than modest gains in the next several months.

Table 2

LOUISVILLE AREA EMPLOYMENT AND UNEMPLOYMENT, 1979-1982*

	Louisville Metropolitan Area		*Clark and Floyd Counties*	
Annual Averages	*Nonfarm Employment*	*Unemployment rate (%)*	*Nonfarm Employment*	*Unemployment rate (%)*
1979	402,700	5.2	46,800	6.1
1980	391,700	7.9	47,400	8.1
1981	383,400	9.0	47,800	10.2
Quarterly Averages				
1981:				
Q1	385,300	7.6	47,400	8.3
Q2	388,300	9.0	48,500	10.1
Q3	383,500	8.6	48,800	9.1
Q4	376,700	10.8	46,600	13.1
1982:				
Q1	376,000	10.9	43,400	14.2
Apr.	369,600	13.4	44,300	14.8

*The employment data refer to establishments located within the area cited and include workers on strike; the unemployment data refer to residents of the area cited and are seasonally adjusted.
#Includes Floyd and Clark counties in Indiana, and Jefferson, Oldham, and Bullitt counties in Kentucky.
SOURCES: Indiana Employment Security Division; Kentucky Department for Human Resources.

TERRE HAUTE

MARVIN FISCHBAUM

Professor of Economics, Indiana State University

Six months ago the Terre Haute economy appeared to be falling apart. Widespread layoffs and announcements of plant and store closings dominated local news. The region remains depressed, but at least one now can see some hopeful signs.

Perhaps the most positive development is the increased recognition by the community of the need to attract new industry and new jobs, and a concomitant willingness to pitch in together to achieve that end. In Grow Terre Haute Day, a cooperative effort this year by leaders from business, labor, education, and government produced a professional exposition that effectively showcased area assets.

The Terre Haute Airport Authority exhibited considerable initiative in uncovering the possibility of acquiring a statewide FMA facility and then in assembling the winning proposal within a very tight time constraint. Broad support for the Authority's action was evidenced when requisite signatures on petitions authorizing the issuance of bonds were easily gathered, while counter-petitions circulated by Indianapolis based air traffic controllers went nowhere. One can argue that the Authority bid too low, and that by constructing a million dollar facility and renting it to the FAA at one dollar per year it is engaging in reverse revenue sharing, but the Authority's actions advertise a new aggressive spirit in the area and a determination to actively pursue opportunities.

The best news during the first half of 1982 might well have been a halt, or at least a protracted pause in the parade of closings that put such a pall on the local outlook in the latter part of 1981. The city also won a few competitions. Most notably, IMC will consolidate its research operations at Terre Haute, will transfer professional staff from Northbrook Illinois, and will build a new laboratory. CBS closed a sound recordings production line in California and intends to move much of the equipment to Terre Haute. A new enterprise, Midland Industrial Alcohol, intends to update and modify an old distillery, not utilized for many years, so that it can make fuel grade alcohol. All of this, however, does not change the basic situation; Terre Haute, despite a diversified industrial base, finds itself with a number of industries experiencing difficulties.

When unemployment statistics are about to be announced, television networks do not send their news crews to Terre Haute. That dubious distinction is awarded to Anderson, Kokomo, or Gary. Among the eleven metropolitan areas in Indiana, the Terre Haute unemployment rate falls in the middle of the pack. Establishment employment figures, although less closely watched, may provide a more accurate picture of the changing economic climate in a locality; and the trend in Terre Haute is discouraging. Jobs in the four county area fell from 69,800 in October 1979 to 57,300 in April of 1982. The table below attempts to place local employment trends within a statewide perspective. Average employment in a given calendar quarter is divided by the average employment level in the corresponding quarter of the previous year. The resultant growth rate for a county is then ranked among the ninety-two counties in Indiana. If a county ranked 1, it had the highest rate of employment growth; a county ranked 92 had the most rapid rate of shrinkage.

The somewhat below average performance of area counties in relatively prosperous 1979, and the strong performance in the recessionary second and third quarters of 1980, constitute a normal pattern for this metropolitan area for at least the past twenty years. Cyclical employment adjustments tended to be of lesser amplitude than elsewhere in the state, and tended to lag both the state and the nation. But something changed in 1981. Rather than showing relative strength in a recession, the rate of employment loss in the region became extreme, and any improvement in 1982 has been slight.

From November 1979 to April 1982 employment in construction dropped from 4,600 to 2,500, primarily because of the completion of major industrial projects, but also because building permits for residential units dropped 55 percent between 1980 and 1981. A further decline in construction activity is likely, as the largest permits issued so far in 1982 involve the updating of a local hospital, the construction of a new convalescent center, and the building, with public funds, of sixty units of residential housing in a scatter site development.

Local employers in troubled industries are not likely to experience quick turnarounds. CBS Records may have seen the end of its long slide, but competition from blank tape and from computer games remains intense. There may be some glimmers of hope in agriculture, especially for those raising livestock, but implement makers, including J.I. Case, are not about to be swamped with orders. Makers of bottles for beverages, such as Midland Glass, continue to be beset by competition from plastic bottles, and aluminum cans, and continue to face declining teenage population. Fashions change, and "gourmet" style enamel cookware, made here by GHC, appears on the way out, while "high tech" professional style cookware is the latest rage. Anaconda Aluminum, dependent on orders from the automotive industry, might see an upturn, but for others the recovery will be slow.

The Terre Haute economic base experienced serious erosion. Community leadership is stronger, and community cooperation more pervasive than in the past, but recovery will be slow.

Table I

INDIANA COUNTY RANK OF EMPLOYMENT GROWTH RATE BY CALENDAR QUARTER

	1979				*1980*				*1981*				*1982*
County	I	II	III	IV	I	II	III	IV	I	II	III	IV	I
Clay	79	62	64	67	15	16	15	28	78	91	88	86	89
Sullivan	54	53	52	51	35	35	29	55	79	88	87	87	57
Vermillion	28	34	32	31	54	50	47	66	81	89	88	89	49
Vigo	57	54	54	54	30	24	23	40	80	90	90	88	87

SOURCE: Indiana Information Retrieval System.

Indiana's Business

PERSONAL INCOME

Indiana's personal income rose, without adjustment for inflation, by 6.32 percent from the fourth quarter of 1980 to the fourth quarter of 1981. Only Michigan at 6.30 percent, Oregon at 6.22 percent and West Virginia at 5.90 percent ranked behind the Hoosier state. The national increase was 10.4 percent with increases of 15 percent or more in North Dakota, Oklahoma and Texas.

The recent poor performance of this state continues a much longer pattern. From the last quarter of 1978 to the end of 1981, Indiana's personal income grew by 24.13 percent, the second worst record of all states; only Iowa had a slower rate of growth at 22.20 percent. During the same period the national rate of growth was over 38 percent.

From 1969 to the most recent quarter for which data are available from the U.S. Bureau of Economic Analysis, we find that the nation's personal income expanded by 212 percent; Indiana, at 195 percent, had just three states (New York, Illinois, and Ohio) trailing behind.

The cumulative dollar value of Indiana's slower growth is staggering. Indiana's share of personal income has declined from 2.52 percent at the start of 1969 to 2.16 percent at the close of 1981. Although this decline of 0.36 in percentage points may appear small, it means that personal income in Indiana was nearly $9 billion less in the fourth quarter of 1981 than it would have been if we had retained our 1969 share of the nation's personal income. In other words, our state's personal income would have been $62.8 billion instead of the reported $53.8 billion in the final quarter of 1981.

The loss of our relative position left Indiana with 15 percent less personal income in 1981 than we would have had if our 1969 position had been sustained. Each Indiana business, government, public, and voluntary organization had a share of that shortfall.

Morton J. Marcus

INDIANA INDUSTRIAL ELECTRICITY SALES
(Seasonally adjusted in millions of kilowatt hours)

	April 1982	*March 1982*	*April 1981*	*Percent Change From One Month Ago*	*Percent Change From One Year Ago*
Anderson	27.0	21.5	28.9	25.6	-6.6
Bedford	12.3	10.9	16.2	12.8	-24.1
Bloomington	3.9	4.6	2.8	-15.2	39.3
Columbus	17.8	17.3	21.1	2.9	-15.6
Connersville	9.1	8.2	9.1	11.0	0.0
Crawfordsville	11.3	11.0	10.4	2.7	8.7
East Chicago	21.6	23.2	28.4	-6.9	-23.9
Elkhart	22.8	21.7	21.6	5.1	5.6
Evansville	47.6	47.4	41.1	0.4	15.8
Fort Wayne	32.2	42.5	47.0	1.6	-8.1
Frankfort	8.0	8.1	8.0	-1.2	0.0
Gary	144.3	184.5	188.2	-21.8	-23.3
Goshen	9.1	8.6	8.8	5.8	3.4
Hammond	55.0	54.5	54.1	0.9	1.7
Huntingon	4.9	4.5	5.0	8.9	-2.0
Indianapolis	344.9	338.5	339.8	1.9	1.5
Jeffersonville	5.7	5.6	6.4	1.8	-10.9
Kokomo	66.2	57.3	78.3	15.5	-15.5
Lafayette	43.9	36.2	39.0	21.3	12.6
LaPorte	14.4	14.7	14.9	-2.0	-3.4
Logansport	7.7	7.0	9.7	10.0	-20.6
Madison	2.6	2.3	2.3	13.0	13.0
Marion	30.5	29.2	29.9	4.5	2.0
Michigan City	43.1	43.3	45.9	-0.5	-6.1
Mishawaka	3.0	3.0	2.9	0.0	3.4
Muncie	12.9	13.4	18.9	-3.7	-31.7
New Albany	4.8	4.4	4.6	9.1	4.3
New Castle	8.7	7.7	8.7	13.0	0.0
Peru	5.2	4.6	4.8	13.0	8.3
Richmond	22.6	25.3	22.6	-10.7	0.0
Seymour	2.3	2.5	2.4	-8.0	-4.2
South Bend	26.2	26.0	25.4	0.8	3.1
Terre Haute	31.0	27.5	32.8	12.7	-5.5
Valparaiso	8.2	8.4	8.5	-2.4	-3.5
Vincennes	3.2	2.9	2.7	10.3	18.5
Wabash	7.1	5.6	7.2	26.8	-1.4
Indiana	**1,767.1**	**1,754.4**	**1,883.3**	**0.7**	**-6.2**

SOURCES: Data provided monthly by public and municipal electric companies.

UNITED STATES – INDIANA BUSINESS INDICATORS*

(Seasonally adjusted indexes unless otherwise noted; base period: 1967 = 100)

		United States				*Indiana*		
		Latest Month	*Previous Month*	*One Year Ago*		*Latest Month*	*Previous Month*	*One Year Ago*
EMPLOYMENT								
Nonagricultural employment	Apr.	137.6	137.9	139.0	Apr.	114.8	115.6	120.0
Manufacturing employment	Apr.	99.0	99.4	104.5	Apr.	84.7	85.5	92.6
Average weekly hours (no.)+	Apr.	38.7	39.1	39.7	Apr.	39.2	39.1	40.1
Average weekly earnings ($)+	Apr.	325.08	326.49	312.84	Apr.	382.2	380.8	373.3
Nonmanufacturing employment	Apr.	153.7	154.1	153.1	Apr.	134.5	135.7	137.7
Unemployment rate (PCT)	Apr.	9.4	9.0	7.3	Apr.	12.6	12.5	10.0
Unemployment-married males (%)	Apr.	6.0	5.5	3.8	—	—	—	—
Continued unemployment claims	–	–	–	–	Apr.	460.8	422.3	412.8
PRODUCTION								
Bituminous coal production	Mar.	168.8	169.0	164.1	—	—	—	—
Industrial electricity production	Jan.	139.4	142.7	153.1	—	—	—	—
Industrial electricity sales	—	—	—	—	Apr.	154.6	153.4	164.7
Manufacturing production	Apr.	139.4	139.9	152.0	Apr.	140.5	137.0	151.2
Raw steel production	Apr.	51.9	70.1	99.3	Apr.	97.5	113.2	134.8
CONSTRUCTION								
Construction activity-total	Mar.	298.5	300.8	323.1	Apr.	180.2	171.2	231.9
Residential housing starts	Apr.	68.6	73.2	101.3	Apr.	58.8	37.4	76.2
Residential expenditures	Mar.	299.4	300.2	379.2	Apr.	176.2	180.0	319.2
Nonresidential expenditures	Mar.	298.0	301.1	295.7	Apr.	182.3	184.3	226.6
Public expenditures	Mar.	202.7	201.1	236.3	—	—	—	—
Public works and utilities	--	—	—	–	Apr.	174.1	118.1	148.0
OTHER INDICATORS								
Personal income per capita ($)[1]	Mar.	10,897.5	10,864.9	10,207.5	81:IV	9,839.0	9,762.0	9,219.0
Passenger car sales (thousands)+	Apr.	669.0	777.0	751.0	Mar.	14.8	10.7	20.6
Year to date (thousands)	Apr.	2,711.0	2,042.0	3,126.0	Mar.	34.0	19.2	49.9

*Current indicators are preliminary and subject to revision

+Not seasonally adjusted

SOURCES: Data on Indiana construction from McGraw-Hill Information Systems Company; Indiana passenger car registration from R.L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

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The Economic Importance of Marinas, Launching Facilities, and Other Boating-Related Activities to the Michigan City Economy

In this issue ▪ ▪ ▪

Economic impact statements are always in fashion. The economic value of recreational resources is the subject of a study of three I.U. faculty members from South Bend. They offer an estimate of the economic benefits derived by Michigan City from its recreational harbor facilities.

The resources of Indiana include its extensive forest areas. Robert Menke offers some thoughts on the value of those resources within the context of the state's economic development effort.

New data help us understand our environment. Recent statistics indicate that Indiana has climbed into the number one position in the production of steel. Revised personal income data suggest slower growth in our state's economy than previously reported.

Morton J. Marcus,
Editor

INDIANA BUSINESS REVIEW

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INTRODUCTION

The loss of firms from the industrialized north to the south and west is a well known fact. Communities in Indiana, like communities in other parts of the nation that are losing firms, have increased their efforts to attract new firms and to develop those activities in which they have a comparative advantage. Economic planners and local leaders frequently want to know the economic impact of a particular firm locating in their locale or of using public funds to encourage the development of some type of economic activity in order to exploit a comparative advantage that the community enjoys. This article illustrates the use of the export-base model in estimating the economic importance of a particular type of activity to an Indiana community. More specifically, this study analyzes the economic impact of marinas, launching facilities and other boating-related activities on the Michigan City economy.

THE MODEL

The export-base model of regional economic analysis used in this study emphasizes the central role of exports (sales to those outside of the region) in that region's short run and long run prosperity. The model generates three basic tenets.

First, the short run prosperity of a small region is largely determined by changes in demand for its exports. One only has to note the news reports about the double digit unemployment rates in Michigan, Ohio, and Indiana to see how the decline in the demand for automobiles across the nation has adversely affected the short run economic health of these communities. However, because regional economies have always attempted to exploit activities in which they have a comparative advantage, they have little ability to make short run adjustments in response to changes in demand for the types of goods they produce. If demand increases for the specialized product the region produces, the region's resources are more intensively utilized and prosperity ensues. But if demand declines drastically, those same specialized resources have few, if any, other opportunities. They simply remain unemployed or underutilized in the short run. The short run stability of a region and the prosperity of its specialized resources are thus largely determined by short run fluctuation in demand for the region's export products.

The second major tenet of the export-base model is that over the longer term the prosperity of a small region depends in part on the comparative advantages the region possesses, changes in these comparative advantages over time, and new comparative advantages the region develops. Prosperity also depends to an important degree on growth in the demand by those outside the region for products that the region produces because of these comparative advantages. Historically, successful regions have exploited new comparative advantages as either the demand for older ones has died out or older comparative advantages disappeared. Unsuccessful regions have generally been unable to develop new comparative advantages for which there was a demand.

The third major tenet of the export-base model is that a change in the export activity of a small region will have a multiplier effect on the total level of economic activity within the region. The multiplier is a number greater than one that indicates the total impact on regional income per dollar change in regional exports. A multiplier of 2.5, for instance, means that a $1 million increase in exports from the region ultimately increases total regional income by $2.5 million. The following example illustrates how the multiplier comes about. Suppose an exporter in the regional economy receives a $1 million increase in orders and the exporter produces the additional export goods by having his production workers work overtime. The $1 million of expenditures goes partly to the exporter, as profits, partly to the production workers as overtime pay, and partly to purchase materials needed for producing the export product. Let's assume that these materials are entirely produced in the region. The region then has $1 million more income. The exporter and his workers, as well as owners and workers who sell the exporter materials, spend some part of their additional earnings in the region. Suppose this amount is $700,000. This $700,000 becomes income for shopkeepers and their employees, restaurateurs and waitresses, grocers and their help, appliance dealers and their sales people, car dealers and their employees, and so on. The $1 million of regional income has now grown to $1.7 million, but the income generation process does not stop there. The expenditure of $700,000 creates $700,000 of additional income for the people receiving this additional income and these people will also start spending part of it on consumer goods and services such as TV sets, clothing, entertainment, and furniture. If they spend $490,000 of this income, regional income will rise to $2.2 million. We could go on round after round of income and spending and show that the $1 million of new export income would, under the condition that $0.70 of each new dollar is spent in the region, generate a total income increase of $3.3 million. The multiplier in this case is 3.3.

AN ALGEBRAIC FORMULATION OF THE EXPORT-BASE MODEL

Our discussion of the export-base model can be summarized algebraically by stating that regional income is the sum of two components: first, export income, which is determined by forces outside the region; and second, local production income, which is a function of the level of regional income. If regional income is Y, export production income is E, and local consumption goods production income is L, regional income is given as:

$$Y = E + L \quad \text{(Equation 1)}$$

Equation 1 states that regional income, Y, is equal to the sum of export production income, E, and local consumption goods production income, L. E is determined by forces outside the region, such as national income, tastes outside of the region and so on.

$$L = p(Y) \quad \text{(Equation 2)}$$

Equation 2 states that local consumption goods income, L, is the proportion of regional income spent within the region, p, times total regional income, Y.

$$Y = E + p(Y) \quad \text{(Equation 3)}$$

Equation 3 is obtained by substituting p(Y) for L in equation 1.

$$Y = E \times (1/1\text{-}p) \quad \text{(Equation 4)}$$

Equation 4 is equation 3 solved for Y. The $(1/1\text{-}p)$ term in equation 4 is the multiplier. Equation 4 indicates that, over the long run, regional income is determined by two factors: the level of export income, E, and the size of the multiplier, $(1/1\text{-}p)$. Hence, to estimate the impact of a type of economic activity on the regional economy—boating-related activities on the Michigan City economy in the case of this study—we require data on the change in E (export activity) and an estimate of the multiplier. We now turn our attention to the methods used to obtain estimates of E and the multiplier.

DATA COLLECTION ON BOATING-RELATED EXPENDITURES

The primary method of collecting data on boating-related expenditures involved surveying the users of the private and public boating facilities in the Michigan City area. A questionnaire was developed and mailed to the users of the marinas and to participants in the Coho Club and Shriners Salmon Derby. The responses from these groups were excellent. We also attempted to hand out questionnaires to users of the public launching facilities, as well as mailing questionnaires to the users of these facilities. Although the level of response from the users of the public launching facilities was sufficiently high to allow us to include this information in the study, the response rate was considerably below the rates obtained from the marinas.

The survey was structured in such a manner that data were collected relating to where the respondent lived, type of craft, size of craft, number of trips the respondent made to Michigan City for boating-related activities, an estimate of the annual expenditure for sixteen different expenditure categories, the proportion of the respondent's time that was spent in eight boating-related activities, and the respondent's income level.

Another boating-related activity is an annual boat show which attracted over 7,000 visitors in 1980. A questionnaire was developed which obtained information on on the residence of the respondent, estimates of expenditures in Michigan City for six expenditure categories, whether they purchased a boat or boating equipment in Michigan City because of the boat show, whether they were planning to purchase a boat or boating equipment in Michigan City because of the boat show, the amount they spent or planned on spending in Michigan City on boats and boating equipment due to the boat show, and their income level. The questionnaires were handed out at the boat show, and more than 500 questionnaires were returned.

From information obtained through the surveys described above, we were able to estimate the impact of the entire population of boaters using Michigan City boating facilities. The estimates were arrived at by determining the total number of boaters in each survey group and classifying each boater as a Michigan City resident or nonresident. The next step entailed applying the average expenditure estimates obtained from the surveys to the estimated number of boaters from each population.

By talking with people who were knowledgeable about boating in Michigan City, we were able to identify forty-four families who have moved into the Michigan City area in order to take advantage of the boating facilities. It was assumed that 25 percent of these families drew their income from outside of Michigan City while the remaining thirty-three families took the place of income earners who would have come whether boating facilities were available or not. It was further assumed that the average income level of the eleven families was $40,000 per year. We were also able to identify twenty-nine families who work outside of Michigan City, but who spend many weekends and virtually the entire summer in Michigan City for boating activities. We assume that these families spend 190 days in Michigan City (30 two-day weekends, 10 three-day weekends, and 100 days of summer vacation) at an average cost of $75 per day. The $75 may seem high, but these are households who must maintain and pay for their housing and their boat for 365 days of the year. This gives us a total direct expenditure in the Michigan City economy of $413,250.

In addition, we have received reliable information that several years ago a businessman located his residence and his business, a specialty bakery plant, in Michigan City so that he and his family could take advantage of the area's boating activities. Although the plant has changed hands, the facility is still employing sixty workers at an average salary of approximately $15,000 apiece for a total payroll of $900,000.

ESTIMATES OF THE MULTIPLIER

The multiplier, as noted above, is an estimate of the total income change, direct and indirect, per dollar of additional boating-related expenditure. For example, a multiplier of 2.5 would indicate that each additional dollar of boating-related expenditure creates total income of $2.50. Consequently, each additional dollar of boating-related expenditures would increase income in sectors not directly related to boating by $1.50.

Clearly, then, we require an estimate of the multiplier so that we can translate direct expenditure changes into total impacts. Ideally, we would construct an input-output model for the Michigan City economy showing the input changes, direct and indirect, resulting from various boating-related outputs. From this model, the necessary multipliers could then be estimated. Such an undertaking is extremely expensive and time-consuming and therefore beyond what is possible in this study. As a second best procedure, we rely on multipliers developed from an input-output model for Door County, Wisconsin. These multipliers have been used in several studies similar in purpose to that undertaken here.[1] The Door County Multipliers are shown in Table 1.

The most noticeable aspect of the Door County multipliers is that they differ substantially from sector to sector. For example, a $1 expenditure on Finance and Insurance has almost twice the total impact of a dollar spent on food stores. To a large extent, the difference in multipliers reflects two factors: 1) the amount of local household income (wages, profits, interest and rent) generated per dollar of expenditure; and 2) the amount of local purchases generated per dollar of expenditure. These two factors vary widely from industry to industry. For example, in the case of the food stores, most of the goods sold are very likely purchased outside the local area. Thus each dollar of expenditure generates a relatively small amount of local purchases. In addition, if many of the local food stores are owned by chains, the profits from these stores will not remain in the local area. Consequently, in the case of food stores, the amount left locally to be re-spent is relatively small and therefore the multiplier effect is small. In contrast, banks, especially those in smaller communities, are usually locally owned and generally purchase funds (e.g., deposits) from local households. Thus, for each dollar spent on interest, a relatively large portion of that dollar remains in the local economy and hence ultimately leads to a much more significant multiplier effect.

Would the multiplier effect in the Michigan City economy be similar to those found in Table 1? Let us briefly mention some calculations we made for LaPorte County, Indiana that indicate that the Door County multipliers are, at least on the average, reasonably representative of the multiplier effects Michigan City would experience. Using personal income data from the Indiana Information Retrieval

Table 1

TABLE OF ECONOMIC MULTIPLIERS BY INDUSTRY SECTOR

Expenditure Category	*Door County Multiplier*	*Expenditure Category*	*Door County Multiplier*
Marine Gasoline	1.8870	Hotel and Motel	2.3699
Marine Insurance	2.9453	Grocery Stores	1.4743
Water Transportation	2.3287	Eat and Drink Places	2.2705
Retail Trade	1.7250	Laundry and Cleaning	2.9453
State and Local Government	2.4704	Auto Repair and Services	1.8870

System (INDIRS), we calculated that for the period 1975 to 1978 each dollar of export income generated between 3.2 and 3.6 dollars of total income. The average multiplier from the Door County data is about 1.8 or 1.9. For the Door County multipliers to be consistent with the multipliers calculated for LaPorte County, each dollar of boating-related expenditure would have to generate for Michigan City residents at least fifty cents of labor income, profits, interest or rents. A relationship between expenditures and income of this size is not unreasonable when we consider that most of the boating-related services are locally owned and largely financed by local banks. Therefore, we are confident that, on the average, the Door County multipliers are reasonably close to what would be obtained if the resources were available to conduct an input-output study for the Michigan City economy.

ESTIMATED ECONOMIC IMPACTS OF BOATING-RELATED ACTIVITIES

The estimated direct expenditures can be combined with the multipliers to obtain the total estimated economic impact of boating-related activities on the Michigan City economy. The survey data were used to obtain two estimates; expenditures by residents of Michigan City and expenditures by people who reside outside of the Michigan City area. The rationale for obtaining separate estimates for these two groups is that there is no multiplier effect for the Michigan City residents whereas the expenditures by the nonresidents can be thought of as export-base income which will have a multiplier effect.

An example might help to clarify why residents and nonresidents are treated differently in the case of the multiplier. Let us suppose that Jones lives in Michigan City and that Smith lives in Chicago. Both Jones and Smith boat in Michigan City. The possibility cannot be ruled out that Jones' expenditures on boating may substitute for other expenditures he would have made in the Michigan City economy. If such substitution takes place, and if Jones spends $500 on boating, then boating related expenditures, as well as the income of all those who benefit from such spending, rise but other Michigan City recipients of Jones' spending now have less. In such a case, Jones' spending causes boating-related expenditures to increase, but total income in the Michigan City economy remains unchanged. With income unchanged no multiplier effects take hold. On the other hand, in the case of Smith, his boating-related expenditures in Michigan City do not substitute for other expenditures he might make there. In effect, Smith brings new income to the Michigan City economy which when spent puts the multiplier process into motion.

Table 2

SUMMARY OF THE ESTIMATED ANNUAL ECONOMIC IMPACTS TO THE MICHIGAN CITY ECONOMY FROM BOATING AND BOATING-RELATED ACTIVITIES (1980 DOLLARS)

Activity	*Annual Income Impact*
Total income change due to boaters using Michigan City facilities.	$9,326,524
Total income change due to the boat show.	4,064,692
Total income change due to households relocating to Michigan City because of boating facilities.	1,279,875
Total income change due to export businesses locating in Michigan City because of boating facilities.	2,700,000
Total income impact.	$17,371,091

The estimated direct expenditures by households relocating to Michigan City because of boating facilities were multiplied by an export multiplier of 1.5 to obtain the total income impact on the Michigan City economy. The payroll of the bakery business that located in Michigan City because of the boating facilities was multiplied by an export multiplier of 3.0 in order to arrive at its total impact on the Michigan City economy. An export multiplier of 3.0 was used since the product is distributed nationally and would therefore have a bigger impact on the local economy than if it was distributed locally.

Table 2 summarizes the estimated economic impacts of boating and boating-related activities on the Michigan City economy.

SUMMARY AND CONCLUSIONS

As a result of our analysis of the boating industry in the Michigan City area we estimate that approximately $17.5 million is generated each year in the Michigan City area economy that would not exist if the boating and boating-related facilities were not in Michigan City. Seventeen and one half million dollars may not seem like a lot of money, but for a relatively small regional economy it is an important contributor. In order to have the same impact, an industry with a multiplier of 1.5 would have to create approximately 1,000 new $12,000 jobs or an industry with a multiplier of 2.0 would have to create 500 new $17,500 jobs. Most cities would be very pleased to create either of these situations.

Few Indiana cities have access to a major lakeshore as does Michigan City, but many Indiana cities do have unique scenic, recreational, or other resources that are capable of and do contribute to their local economies. Our study of the boating industry has been very useful in demonstrating that the time, effort and resources used to develop the lakefront have benefited the entire local economy and the great majority of Michigan City residents. In similar fashion the export-base model could be very useful in combatting skepticism toward other worthwhile developmental projects.

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[1] Robert W. Schott, "The Impact of Great Lakes Recreational Boating on the Economy of Michigan" (Master of Science thesis, Michigan State University, 1975), p. 89.

Forestry's Claim to the Future

ROBERT H. MENKE

President, Styline Corporation/Ferdinand Furniture Company

Indiana, like most states, needs to create more industrial jobs. It appears certain that in the future many plants which supply automotive parts will be scaled down as the automobile industry concentrates on making smaller, more fuel-efficient cars. Indiana must continue to try to attract new industry, but, at the same time, it should encourage the expansion of the basic industries that it already has.

Wood manufacturing in Indiana, not including the housing industry, employs some forty to fifty thousand people. Because it is made up of many scattered units, it plugs along unnoticed, except perhaps in small communities on payday. It is an old industry—as old as agriculture. Even the bodies and wheels of early horseless carriages were made of hickory and oak. At the turn of the century Indiana was the largest producer of hardwood lumber in the world. For a time after World War I factories in Indiana produced a larger tonnage of furniture than was manufactured anywhere else in the United States—furniture not always of the best quality but made to last with solid wood tops, thick veneer ends and resawn drawer bottoms, all fastened together with animal glues and finished in a cloud of thick golden varnish. A segment of this industry survives and is flourishing today.

Economists predict that American consumers will increase the percentage of their income spent on housing and furniture in the future as the cost of transportation rises and as the benefits of new forms of communication make new homes more attractive. There is a good chance that wood-using industries in Indiana—factory-made housing, conventional building business, manufacture of cabinets and furniture—can greatly expand their employment in the years ahead. If this is to happen, structural lumber, particle board, and fiberboard must be made available at low cost. As inflation continues to increase freight rates, building contractors will find it impractical to buy these heavy, bulky products from distant suppliers. Even today, freight costs total one third of the $16,000 invoice for a carload of western particle board shipped to Indiana.

HARDWOOD FORESTRY

The recent approval of changed standards for the use of yellow poplar as structural lumber opens a way for new hardwood lumbering operations. Higher shipping rates on southern and west coast softwood lumber, together with long-term predictions of softwood shortages, will encourage the cultivation of poplar. (Experts are saying shortfalls of timber will occur worldwide after the year 2000.) Yellow poplar is self-seeding in woods openings, grows straight, is disease-free, and matures in half the time it takes to grow other commercially-valuable hardwoods (80-100 years for white and red oak). As mills cut two-by-fours, better grades of poplar could be made available at lower cost for mouldings and dimensioned wood parts. Also, increased lumbering will provide wood waste and roundwood for fiberboard plants, pulp mills, wood chemical facilities, and even firewood.

Hardwood forestry suffers from a lack of markets for low-grade material. Of 3.8 million acres of wooded land in Indiana, less than 15 percent is quality timber. Most wood lots are understocked, crowded with defective trees or unmarketable species—puckerbrush estates! Even at that, Indiana does a better job of growing hardwoods than other states simply because fifteen local veneer mills bid for select logs and because the Forestry Division of the Indiana Department of Natural Resources, working with private agencies, encourages growth of veneer logs among those tree farmers who have established hardwood stands. Ninety percent of Indiana's woodlands are owned by private individuals who are interested foremost in recreational use of their land. Better markets for low-grade trees and quicker regeneration of more valuable hardwood inventory would do much to revitalize concepts of multipurpose forestry.

Even though per capita consumption of hardwood lumber has been decreasing for many years, future supplies of large logs will not be adequate for a growing world population and will expand the demand for wood. Pressure will increase to clear marginal land for production of food crops. Most hardwoods in the U.S. grow in the South, but as demand for softwood increases, most of these scrub areas will become pine plantations. A program to encourage yellow poplar regeneration in Indiana will eventually cause more owners to produce a variety of hardwoods on suitable sites which will result in, not only the production of more fiber, but more high-quality timber as well. The U.S. will someday become a net exporter of wood rather than a net importer. (Total exports of lumber are 2.1 billion *board* feet annually; imports, 11.5 bbf.)

EMPLOYMENT AND INCENTIVES IN FORESTRY

Indiana is surrounded by states with extensive resources of timberland–Michigan with 8.8 million acres; Wisconsin, 14.5 million acres; Kentucky, 11.9 million acres; Ohio, 6.4 million acres; Illinois, 3.7 million acres. Lake Michigan and the Ohio River provide a natural corridor for shipping hardwood logs and roundwood to be used for pulp and chemicals. Processing plants located along Lake Michigan or on the Ohio River could draw on these resources as well as on local supplies of hardwood. Because of Indiana's central location, its established forestry program and its diversified wood industry, the state could easily become an expanded center for wood processing. A complex such as this, based on sustained yields of renewable resources, offers more hope for future employment than expansion based on scarce raw materials or on the vagaries of defense spending. Harnessing the productive capacity of tens of thousands of small wood lots would provide benefits for many small owners and eliminate the need for forestry incentive payments.

The place for incentives is in the industrial area. The classification law passed in 1921, which frees land dedicated to tree-farming from burdensome property taxes, plus the liberalized capital gains tax treatment of forest income, furnishes sufficient inducement for tree farmers–providing, of course, there is adequate income from sales of low-grade trees. What would ultimately help the people of Indiana would be a system of broad incentives that would serve to attract and expand plants that utilize wood fiber. The Hoosier state could make unlimited bonding available for construction of wood panel, pulp, wood chemical, and wood energy facilities. Moratoriums on property taxes would encourage these companies to make long-term investments for the benefit of related industrial employment. Even state income taxes could be reduced or postponed on profits from those kinds of investments which will cause people to plant trees and contract for timber stand improvement harvests. Agricultural Stabilization and Conservation Service subsidies for deadening undesirable trees do waste resources and contaminate the environment with noxious chemicals, but are necessary until there is a decided shift in forestry economics.

FORESTRY AND THE ENVIRONMENT

The greatest payoff in the expanded use of low-grade wood material would be in related environmental benefits. Reforestation is sorely needed in the world today. Even community forestry is in disarray. Indiana is losing 100 million tons of top soil each year, much of it from land which should be reforested. The U.S. loses 6.4 *billion* tons annually. Thousands of acres of bottom lands are cleared each year increasing the hazard of flooding. Trees are needed to generate oxygen and as a carbon sink to absorb increased air-pollution. More woods are needed for wildlife, for recreation, and for beauty of landscape. What is imminently exciting about the expansion of basic wood-using industries is their potential impact on multipurpose forestry. The creation of jobs is important, but more important is the improvement of our living space and the protection of our environment.

Indiana forests will be a greater public asset in the future if we plan now to provide the incentives needed to attract and expand industries which use low-grade wood materials. Thousands of owners of small woodlands will be encouraged to practice tree-farming if primary wood industries assist in the management of scattered woodlands. Forestry's claim to the future involves environmental needs which will be best served by programs which place higher economic value on all trees.

Indiana's Business

NEW NUMERICAL VIEWS

INDIANA: NUMBER 1 IN STEEL

No one seems to have noticed, but Indiana has moved up to become the leading steel producing state in the nation. Attention has focused on the decline in production and employment. But as we have learned in many instances, hard times fall with considerably different impacts across the nation. In the case of steel, Indiana has been a relative winner, less severely affected than other states.

Indiana's share of U.S. raw steel production has climbed from less than 16 percent in 1974 to more than 21 percent thus far this year. It remains to be seen if this result for the first five months of 1982 holds for the year; if it does Indiana will have another first for its cap. In 1978 Indiana climbed past Ohio into the number two position in the nation and, in this year of deep recession, the Hoosier state has passed Pennsylvania, to claim the number one position in production of raw steel (see Figure 1).

Indiana's steel output has performed better than the nation in six of the past eight years. During five of those eight years, steel output in the state and nation has fallen, but the fall in Indiana averaged 11.4 percent per year compared to the nation's 14.1 percent average decline. In the three years of growing steel output, Indiana averaged 13.2 percent in growth, while the nation lagged at an average of 8.8 percent growth (see Table 1).

No one pretends that the steel industry is in good health, but the malady is less intense in Indiana where the nation's more modern facilities are located.

REVISED PERSONAL INCOME DATA

The budgetary process of the State of Indiana utilizes forecasts of Indiana's personal income. The Econometric Model of Indiana (EMI) from this office produces forecasts of Indiana's personal income.

Figure 1

SHARE OF U.S. RAW STEEL PRODUCTION

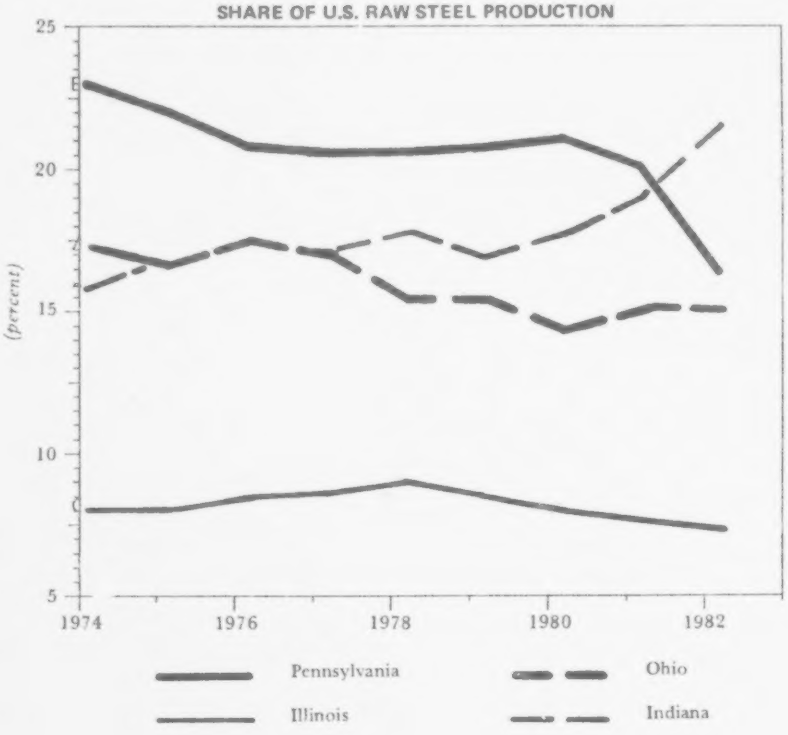


Table 1

RAW STEEL PRODUCTION

	Indiana			United States	
	Tons (Millions)	*Share of U.S.*	*Percent Change*	*Tons (Millions)*	*Percent Change*
1974	23.1	15.9		145.5	
1975	19.8	17.0	−14.2	116.8	−19.7
1976	22.2	17.3	+12.0	128.2	+9.8
1977	21.5	17.2	−3.2	124.7	−2.7
1978	24.4	17.8	+13.4	136.7	+9.6
1979	22.9	16.9	−5.9	135.9	−0.6
1980	19.8	17.7	−13.5	112.1	−17.5
1981	22.7	18.9	+14.3	119.9	+7.0
1982*	18.0	21.5	−20.4	83.8	−30.1

SOURCE: American Iron and Steel Institute.

*Division of Research projection based on 1982 data January to May and 1974 to 1981 average performance for first five months of each year.

Both depend on estimates of personal income generated by the U.S. Bureau of Economic Analysis (BEA). That is the only current relationship between the state's budgetary process and EMI. Both have been thrown a curve recently by the extensive revisions in the personal income estimates made by BEA (see Table 2).

For 1981, BEA's quarterly revisions ranged from –1.8 percent to –2.8 percent. That may not read as a big change, but in a state with personal income running at more than $50 billion per year, a one percent revision is $500 million. The Budget Agency's revenue anticipations were based on the latest and best available data. When the estimates of the past were revised downward, the revenue projections proved to be too high.

The problems are statistical but also political. They relate to the very nature of the data collection and reporting processes in this nation. State and local data are based on extensive but poorly supported systems. Much of the information available for states and localities is derived by complex estimating techniques which trail behind the more widely supported national programs. When budget slashing begins in Washington, it has direct impact at the state and local level because no subnational government can afford to maintain the needed data resources for state or local estimates.

As Figure 2 depicts, the revised estimates of Indiana personal income released in the past few weeks by the Bureau of Economic Analysis include upward revisions prior to 1977, and almost exclusively downward revisions since then. The downward revision for the fourth quarter of 1981 equaled $1.45 billion or 2.6 percent. Instead of a growth in Indiana personal income of 7.5 percent from the last quarter of 1980 to the same quarter of 1981, the revised figures show a growth of 6.3 percent. The difference in dollars is considerable: $672 million in growth.

Those who work with the data regularly are accustomed to these shocks. They are part of the process by which data resources are improved. They are necessary

Table 2

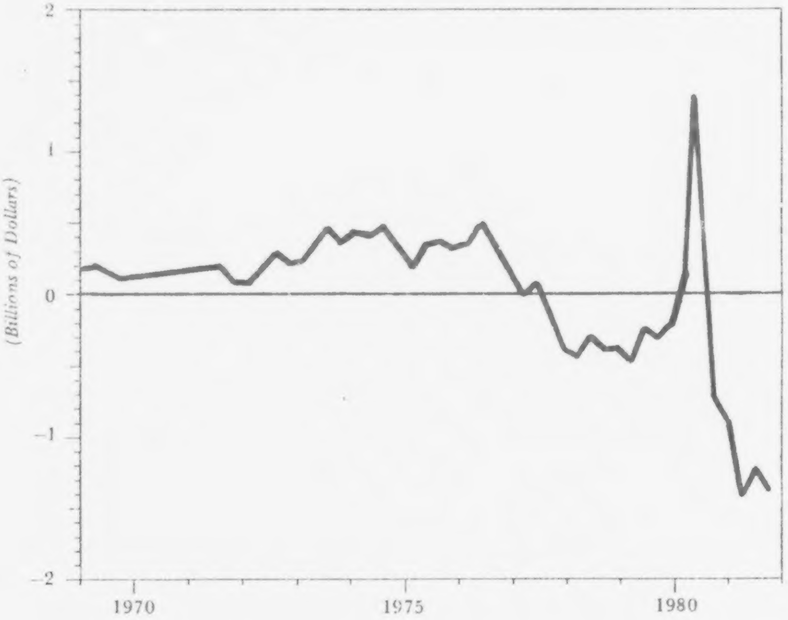
INDIANA PERSONAL INCOME
(Millions of Dollars)

Quarter	*Previous*	*Revised*	*Percent Change*
1971:1	20,080	20,234	.77
1971:2	20,778	20,939	.77
1971:3	20,917	21,106	.90
1971:4	21,542	21,717	.81
1972:1	22,013	22,088	.34
1972:2	22,474	22,543	.31
1972:3	22,871	23,021	.66
1972:4	23,776	24,050	1.15
1973:1	25,169	23,348	.71
1973:2	25,880	26,086	.80
1973:3	26,471	26,799	1.24
1973:4	27,110	27,548	1.62
1974:1	26,953	27,281	1.22
1974:2	27,320	27,714	1.44
1974:3	28,220	28,597	1.34
1974:4	28,612	29,047	1.52
1975:1	28,667	28,979	1.09
1975:2	29,223	29,361	.47
1975:3	30,344	30,647	1.00
1975:4	31,029	31,352	1.04
1976:1	32,058	32,339	.88
1976:2	32,926	33,228	.92
1976:3	33,393	33,841	1.34
1976:4	34,445	34,755	.90
1977:1	25,326	35,467	.40
1977:2	36,690	36,621	–.19
1977:3	37,588	37,614	.07
1977:4	38,695	38,494	–.51
1978:1	39,500	39,060	–1.11
1978:2	40,989	40,496	–1.20
1978:3	42,028	41,676	–.84
1978:4	43,753	43,302	–1.03
1979:1	45,325	44,887	–.97
1979:2	45,774	45,242	–1.16
1979:3	46,442	46,141	–.65
1979:4	47,578	47,194	–.81
1980:1	48,226	47,958	–.56
1980:2	47,717	47,788	.15
1980:3	48,844	50,152	2.68
1980:4	51,331	50,553	–1.52
1981:1	52,903	51,958	–1.79
1981:2	53,603	52,105	–2.79
1981:3	54,685	53,381	–2.38
1981:4	55,200	53,750	–2.63

changes resulting from improvements in technique and information, and sometimes from definitional changes. For the number-using public, including the political leadership, the changes can be traumatic if they go the "wrong" way. It is a tribute to the number producers that they have generated figures which have become important to policy makers. In time it may be necessary for state and local policy makers to give support to the embattled agencies in Washington who generate these needed data.

Figure 2

DIFFERENCES BETWEEN INITIAL AND REVISED ESTIMATES OF INDIANA PERSONAL INCOME



U.S. MAN-HOURS IN INDUSTRIAL PRODUCTION
(Seasonally Adjusted Data)

		United States				*Indiana*		
		Latest Month (millions)	*Percent Change From*			*Latest Month* (thousands)	*Percent Change From*	
			One Month Ago	*One Year Ago*			*One Month Ago*	*One Year Ag*
Manufacturing	**May**	**738.4**	**0.2**	**−9.7**	**Apr.**	**24,055.0**	**−1.0**	**−10.6**
Food	May	63.3	2.3	−3.2	Apr.	1,413.8	2.1	−0.9
Apparel and textiles	May	71.6	−2.0	−11.7	Apr.	366.6	−0.0	−10.7
Lumber and wood	May	24.0	0.9	−11.9	Apr.	613.5	5.4	−18.7
Furniture	May	16.2	−2.5	−9.5	Apr.	648.7	−2.6	−9.6
Paper	May	27.4	−3.6	−6.4	Apr.	514.0	−1.2	−13.1
Printing	May	46.6	−3.3	−2.3	Apr.	1,118.4	2.6	0.8
Chemicals	May	45.0	1.2	−4.1	Apr.	1,233.4	3.1	−2.5
Petroleum and products	May	8.9	1.7	−6.7	Apr.	170.6	4.3	−19.9
Rubber and plastics	May	28.2	0.7	−7.2	Apr.	1,172.0	2.7	−7.0
Stone, clay and glass	May	23.8	2.1	−10.8	Apr.	825.1	−1.8	−10.3
Primary metals	May	37.1	−2.1	−20.4	Apr.	3,748.7	−2.2	−13.4
Fabricated metals	May	57.5	0.2	−13.3	Apr.	1,987.7	−2.8	−9.2
Nonelectrical machinery	May	95.8	−2.2	−8.7	Apr.	2,610.7	−4.3	−12.2
Electrical machinery	May	80.6	1.2	−4.9	Apr.	3,711.1	0.8	−14.7
Transport equipment	May	73.6	3.2	−7.8	Apr.	3,070.9	0.9	−9.1

Outlook Calendar

The Indiana University School of Business Outlook Panel will tour the state again in November. Led by Dean Schuyler F. Otteson, the faculty group will examine national and state prospects for the year ahead. They will be joined by local faculty experts for selected metropolitan areas.

The Outlook Panel schedule for 1982:

Wednesday	November 3	Columbus Indianapolis
Thursday	November 4	Richmond Fort Wayne Elkhart
Friday	November 5	South Bend Highland
Monday	November 8	Bloomington
Tuesday	November 9	New Albany Evansville
Wednesday	November 10	Terre Haute Kokomo Lafayette

Local times and places will be announced by the organizing Chambers of Commerce.

INDIANA INDUSTRIAL ELECTRICITY SALES
(Seasonally Adjusted in Millions of Kilowatt Hours)

	May 1982	*Apr. 1982*	*May 1981*	*Percent Change From* *One Month Ago*	*One Year Ago*
Anderson	19.6	27.0	17.7	–27.4	10.7
Bedford	12.0	12.3	16.0	–2.4	–25.0
Bloomington	4.3	3.9	2.7	10.3	59.3
Columbus	17.9	17.8	24.4	.6	–26.6
Connersville	8.2	9.1	8.7	–9.9	–5.7
Crawfordsville	10.4	11.3	8.9	–8.0	16.9
East Chicago	21.0	21.6	27.5	–2.8	–23.6
Elkhart	23.9	22.8	21.5	4.8	11.2
Evansville	45.0	47.6	42.1	–5.5	6.9
Fort Wayne	44.1	43.2	47.4	2.1	–7.0
Frankfort	8.4	8.0	7.6	5.0	10.5
Gary	133.9	144.3	181.9	–7.2	–26.4
Goshen	8.5	9.1	9.0	–6.6	–5.6
Hammond	58.8	55.0	55.6	6.9	5.8
Huntington	4.5	4.9	4.9	–8.2	–8.2
Indianapolis	313.8	344.9	339.1	–9.0	–7.5
Jeffersonville	5.3	5.7	7.3	–7.0	–27.4
Kokomo	64.2	66.2	71.2	–3.0	–9.8
Lafayette	37.6	43.9	41.6	–14.4	–9.6
LaPorte	13.6	14.4	15.1	–5.6	–9.9
Logansport	7.6	7.7	9.7	–1.3	–21.6
Madison	2.3	2.6	2.6	–11.5	–11.5
Marion	33.0	30.5	30.3	8.2	8.9
Michigan City	45.1	43.1	48.5	8.9	–7.0
Mishawaka	3.6	3.0	1.5	20.0	140.0
Muncie	14.3	13.0	18.8	10.0	–23.9
New Albany	4.8	4.8	5.1	0.0	–5.9
New Castle	7.7	8.7	8.6	–11.5	–10.4
Peru	5.1	5.7	4.8	–1.9	6.2
Richmond	21.5	27.6	22.1	–4.9	–2.7
Seymour	2.3	2.3	2.5	0.0	–8.0
South Bend	30.0	26.2	25.6	14.5	17.2
Terre Haute	24.8	31.0	31.0	–20.0	–20.0
Valparaiso	8.8	8.2	8.4	7.3	4.8
Vincennes	2.8	3.2	2.4	–12.5	16.7
Wabash	6.4	7.1	6.7	–9.9	–4.5
Indiana	**1,704.0**	**1,767.1**	**1,893.6**	**–3.6**	**–10.0**

SOURCES: Data provided monthly by public and municipal electric companies.

UNITED STATES–INDIANA BUSINESS INDICATORS*

(Seasonally Adjusted Unless Otherwise Noted; Base Period: 1967 = 100)

		United States				*Indiana*		
		Latest Month	*Previous Month*	*One Year Ago*		*Latest Month*	*Previous Month*	*One Year Ago*
EMPLOYMENT								
Nonagricultural employment	May	136.7	136.8	138.5	May	114.3	114.6	119.4
Manufacturing employment	May	98.3	98.5	104.5	May	83.8	84.7	92.9
Average weekly hours (no.)+	May	39.0	38.7	40.1	May	39.2	39.2	40.4
Average weekly earnings ($)+	May	329.55	325.47	317.59	May	381.8	381.0	376.1
Nonmanufacturing employment	May	152.6	152.8	152.6	May	134.7	135.1	137.1
Unemployment rate (%)	May	9.5	9.4	7.5	May	12.1	12.6	9.8
Unemployment-married males (%)	May	6.1	6.0	4.1	–	–	–	–
Continued unemployment claims	–	–	–	–	May	432.7	460.8	504.5
PRODUCTION								
Bituminous coal production	May	156.4	156.4	75.8	–	–	–	–
Industrial electricity production	Feb.	136.0	139.4	153.7	–	–	–	–
Industrial electricity sales	–	–	–	–	May	148.6	154.5	165.0
Manufacturing production	May	139.1	139.2	152.8	May	136.5	139.9	150.7
Raw steel production	May	58.6	61.6	100.0	May	97.9	99.2	157.3
CONSTRUCTION								
Construction activity–Total	Apr.	300.6	302.4	318.3	May	184.2	175.1	218.2
Residential housing starts	May	84.5	69.1	91.2	May	39.8	68.4	71.4
Residential expenditures	Apr.	302.9	302.5	375.1	May	171.9	170.8	268.9
Nonresidential expenditures	Apr.	299.3	302.2	290.6	May	179.9	182.5	221.5
Public expenditures	Apr.	196.4	207.7	220.7	–	–	–	–
Public works and utilities	–	–	–	–	May	196.7	168.5	143.2
OTHER INDICATORS								
Personal income per capita ($)	Apr.	10,929.1	10,898.8	10,258.7	81:IV	9,839.0	9,762.0	9.219.0
Passenger car sales (thousands)+	May	774.0	669.0	734.0	Apr.	13.2	14.8	15.8
Year to date (thousands)	May	3,388.0	2,614.0	3,860.0	Apr.	47.1	33.9	65.7

*Current indicators are preliminary and subject to revision.

+Not seasonally adjusted.

SOURCES: Data on Indiana construction from McGraw-Hill Information Systems Company; Indiana passenger car registration from R.L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

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David A. Reed and Charles A. Sim **Economic Development in Indiana: Retrospect and Prospect / 2**

Morton J. Marcus **Recession's Widespread Impact / 9**

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Economic Development in Indiana: Retrospect and Prospect

In this issue . . .

Economic development is the leading topic of discussion around the Hoosier state this summer. The recent recession has heightened awareness of the state's problems, increased concern over our potential, and brought forth a new citizen involvement.

David Reed and Charles Sim offer an important overview of trends in the state's economy and the policies which the Indiana Department of Commerce has developed to help business in the state. This statement clarifies the direction and thinking behind current public programs.

The long-term view of Reed and Sim is reinforced by an examination of personal income in the past year. The divergence of Indiana from the national economy is examined as this month's feature in *Indiana's Business.*

Basic to economic development plans is knowledge of our communities. A brief note in this issue indicates that the latest data are now available from the 1980 Census of Population and Housing through the Indiana State Data Center.

Morton J. Marcus,
Editor

INDIANA BUSINESS REVIEW

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A STATEMENT OF THE ECONOMIC SITUATION

During the first quarter of 1982 almost 350,000 Indiana citizens were unemployed and looking for work. The measured unemployment rate was 12.5 percent in March. The unemployment rate is a statistic which gets a great deal of attention. Though it is not often recognized, the unemployment rate really represents two distinct symptoms of the economic distress of the state:

> –The permanent loss of an estimated 55,000 manufacturing jobs in the state from 1977 to 1980.
> –The great sensitivity of the state's economy to swings in the national economy which leads to exaggerated fluctuations in employment and income.

These are symptoms of our economic distress with which we are all familiar. Other symptoms may be just as revealing of the seriousness of the problem though they often get less attention:

> –Per capita personal income in Indiana in 1980 was $8,900, only 94 percent of the national average. The position of Indiana relative to the nation has declined steadily since 1954.
> –Manufacturing in Indiana accounted for nearly 41 percent of the earned income in 1979. This compares with 26 percent for the U.S. Relative to the U.S., we have become more dependent on manufacturing as a source of income in the last decade.
> –Value added per dollar of wages paid in Indiana manufacturing is below the national average and has been declining steadily since the early 1960s.
> –Capital investment per dollar of wages paid in Indiana has declined from the mid-1960s when it slipped below the national average for the first time and where it has remained ever since.
> –Of the five major industries in which we are specialized, only one, rubber and miscellaneous plastic products, is a high growth industry nationwide. The others, including primary metals and transportation equipment, were below the U.S. average growth rate in manufacturing for the 1970s, and will continue to be slow growers in the foreseeable future.

To state the situation succinctly, Indiana is dependent on a few manufacturing industries for a high and rising portion of its economic activity. Those industries are generally growing slowly and are very sensitive to the fluctuations in the national economy. Investment and productivity in Indiana are declining relative to the nation. We are experiencing high cyclical unemployment, permanent loss of manufacturing jobs, and lost growth in income and population.

These current economic conditions in Indiana are a reflection of long-term national economic trends, several national trends unique to the 1970s, and the cyclical nature of the national economy. The purpose of this paper is to examine the historical development and performance of the Indiana economy to form a perspective on current economic conditions in Indiana. The perspective provides a context for a discussion of future economic development in Indiana which includes a profile of the state's economic development resources and the Indiana Department of Commerce's economic development programs.

LONG TERM NATIONAL ECONOMIC TRENDS

For many, the immediacy of current conditions seems to overwhelm the historical context and long-term trends of which the present and recent past are only small expressions. Economic growth, the sustained increase in output per capita, is a long-term process fueled by population growth and guided by technological change and political power. The process is rarely a smooth one. Often it involves changes in the allocation of the factors of production: labor, capital, and natural resources. It frequently pits the established elements of the economic order against the forces of change in a contest for access to those factors of production. It is a process characterized in the short-term not by smooth transitions but rather by dislocations, misallocations, and fierce competition in both the political and economic arenas. Stress pervades the entire economic system as it tries to adjust to emerging demographic and technological realities.

Over the last century, at least four major national economic trends have played a significant role in shaping the Indiana economy:

> –The role of agriculture in the economy has declined significantly. Agriculture accounts for a far smaller share of national output and both a much smaller share and a smaller absolute amount of employment.
>
> –Manufacturing dominated the economy of the country for much of the period in question. Its share of output and employment rose steadily until about 1950. Much of this growth was concentrated in heavy manufacturing. Subsequently, the manufacturing sector's employment share began to level off, and after about 1960 began to decline.
>
> –There has been a steady and continuous increase in the services sector's share of output and employment.
>
> –There has been significant convergence of the economies of the subnational regions of the country. Populations, labor force structures, and per capita personal incomes have become much more similar over the last hundred years. This trend has accelerated greatly in the last two decades as the industrialization and urbanization of the South and West led to higher per capita incomes and greater relative representation of the manufacturing sector in those regions.

TRENDS IN THE DEVELOPMENT OF THE INDIANA ECONOMY

The national trends away from an agrarian economy and toward increasing concentration in manufacturing were mirrored and magnified in the Indiana economy. As this century has progressed, the state's economic link to agriculture and forestry has diminished, while its base in manufacturing has grown. Throughout the past 80 years, Indiana has had a larger percentage (than the nation) of its labor force in the manufacturing sector, and particularly in the durable goods portion of the sector. Indiana's economy has not shared fully in the robust growth of the services sector which is an emerging trend in the national economy. The relative importance of this sector in Indiana has actually declined since the turn of the century (see Table 1).

This concentration in manufacturing, and in particular durables manufacturing, stemmed from many factors. Among them were proximity to natural resources, central location in proximity to markets, good transportation, and a reasonably abundant supply of labor (many of whom were displaced agricultural workers, at least early in the state's industrial development). Many of these factors continue to exist. That, coupled with the inertia inherent in the economy, has resulted in the continued dominance of durables manufacturing in the state's economy.

As Indiana moved from an agrarian to an industrial economy its per capita personal income rose relative to U.S. averages for the period 1880-1940. Beginning in 1940 it moved above the U.S. average. It peaked at 106.3 percent of the U.S. average in 1953 and remained above the U.S. figure until 1966. Since then it has continued the relatively steady decline begun in 1953 until, by 1980, it was approximately 94 percent of the national average. This relative decline stems in part from slow growth in Indiana, but it also has come about as a result of high rates of income growth in the South and West where industrialization came much later than it did here.

RECENT TRENDS IN INDIANA

The state's manufacturing base, particularly in metals production, which

Table 1

PERCENT OF THE LABOR FORCE IN MANUFACTURING AND SERVICES IN THE U.S. AND INDIANA 1900-1980

	Manufacturing		*Services*	
	United States	*Indiana*	*United States*	*Indiana*
1900	14.6	12.4	16.9	15.7
1940	23.2	29.5	22.5	18.8
1950	26.4	34.3	23.7	18.6
1960	28.5	35.6	26.0	24.3
1970	26.1	34.4	30.8	28.1
1980	22.3	30.6	40.9	34.3

NOTE: Data for 1980 for employed persons 16 and over. All previous years' data are for labor force 14 years and over. Services include finance, insurance and real estate; business and repair services; personal entertainment and recreation services; professional and related services; and public administration.

SOURCE: Census of Population, U.S. Bureau of the Census.

developed over the 1900-1940 period, positioned the state well to support the nation's war efforts during the 1940s. During the 1940s Indiana's total employment increased 31.3 percent compared to a national employment increase of 24.5 percent. The state's favorable employment growth rate during the 1940s can be attributed to the high representation in the state of industries which were growing fast nationally and to the fact that Indiana's firms were growing faster on the whole than their respective industries were growing nationally.

In the 1950s, total employment growth in Indiana was less than half of the national growth rate, 4.0 percent for Indiana compared to 9.3 percent for the U.S. The state continued to have a large representation of industries which were growing fast nationally, but the state's firms overall were growing more slowly than their respective industries nationally. Durables manufacturing, contract construction, transportation, communication and utilities, retail trade, and nondurables manufacturing grew more slowly in Indiana than at the national level during the 1950s.

During the 1960s, total employment growth trends changed dramatically from the prior decade. Total employment in the U.S. grew by 21.0 percent and Indiana total employment grew by 19.8 percent or 327,300 jobs. During the 1960s, the state's employment was concentrated in industries which were slow growing industries nationally for the first time. However, several sectors, including durables manufacturing, contract construction, retail trade, services, and government grew more rapidly in Indiana than at the national level.

In the 1970-80 period, Indiana's total employment growth rate was slightly more than half of the national growth rate. U.S. employment grew by 25.2 percent while Indiana employment increased by 13.1 percent, adding 259,300 jobs to the Indiana economy. The state's slow growth again resulted from employment concentration in several slow growth sectors, including durables manufacturing, nondurables manufacturing, and agriculture. In addition, several sectors, including durables and nondurables manufacturing, retail trade, government, finance, insurance, real estate, and agriculture grew less rapidly in the 1970s in Indiana than at the national level.

The concentration of the state's economy in the durable goods sectors and more specifically in metals-related industry such as steel production, automobile parts, household appliances, and fabricated metal products has several implications for future economic development:

—The concentration in metals related industry indicates that the growth of the state's economy could be closely related to the national growth of these industries and their locational preferences. Should demand change nationally for the products of these industries, Indiana's economy would be particularly affected. Should the locational production preferences of these industries be altered, the state's economy could be affected.

—The state's strength in durable goods manufacturing implies a strong sensitivity to the national business cycle. Demand for durable goods tends to decline more rapidly during economic downturns and increase more rapidly during economic upturns.

—Since production in the metals industries is concentrated in large facilities, the state's economy is linked to the ability of these facilities and the firms which operate them to grow and remain competitive.

—The mass market required by these industries implies the need for an efficient transportation system to move the products to the market.

—The capital intensity of the production facilities indicates the importance of available capital to the industries and the Indiana economy.

—Since these products are traded on an international basis, the international competitiveness of these industries and their trade balances is particularly important to Indiana.

RECENT NATIONAL ECONOMIC TRENDS

Although the Indiana economy's performance in the 1970s was a reflection of long-term trends in the national economy, there were additional trends nationally in the 1970s which had particular affect on the Indiana economy.

The slowing national rate of growth in per capita GNP and disposable personal income per capita during the 1970s is generally attributable to two factors: rampant inflation and stagnating productivity (output per worker hour). Productivity growth slowed in the mid-1960s. During the 1947-65 period, productivity growth averaged 3.2 percent a year; for 1965-73, 2.3 percent; from 1973-78, 1 percent; and productivity actually declined in 1979.

The reasons for the decline in productivity growth include:

—A decline in the quality of the labor force as young, inexperienced, and female, inexperienced workers joined the labor force in great numbers.

—A slowdown in the growth of capital investment per worker from 2.7 percent a year from the mid-1950s to mid-1960s to about 1.5 percent a year since 1967.

—The growth of federal regulations on business which imposed enormous compliance costs, and led to time-consuming uncertainty among business decision makers.

—Rampant inflation which retards capital investment by shortening the time horizon of decision makers, and increasing interest rates on funds. (It should also be noted that lack of productivity growth contributes to inflation.)

One of the ramifications of the high inflation/low productivity growth in the 1970s in the U.S. was the deterioration of the nation's international economic position. In the 1970s the U.S. lost 23 percent of its share of the world market, compared with a sixteen percent decline during the 1960s. Few industries have been exempt from the erosion of the U.S. industrial position, but those most affected include motor vehicles, aircraft, organic chemicals, telecommunications apparatus, nonelectrical machinery, metal-working machinery, and agricultural machinery.

The gloomy 1970s in Indiana appear to reflect the culmination of long term national trends previously identified—the slow growth of the manufacturing sector since 1960 and the convergence of regional economies which favored regions which at the beginning of the century were less developed—and several national trends, including high inflation and low productivity growth, unique to the 1970s.

In 1979, manufacturing accounted for nearly 41 percent of Indiana's earned income, compared to 26 percent for the U.S. The manufacturing sector is uniquely impacted by the business cycle. Demand for durable goods tends to decline more rapidly during economic downturns and increase more rapidly during economic upturns. The Indiana economy is particularly sensitive to the cyclical behavior of the nation's economy.

Current Indiana economic conditions are thus a result of the slow long-term growth of manufacturing, complemented by specific national trends during the 1970s, and the particular sensitivity of the manufacturing sector to dips in the business cycle. These three factors have combined to produce particularly adverse economic conditions for Indiana.

AN ECONOMIC DEVELOPMENT PROFILE

Future economic development in the state hinges on an improved national economy and on the location decisions of firms looking to expand or relocate their production facilities. In making a location decision a firm will assess factors related to the firm's production process, which takes inputs (such as labor, natural resources, and energy), and produces saleable outputs as well as waste products. It is the relative availability, price, and quality of inputs, the markets for outputs, and the facilities for waste products in an area which affect a firm's location decision. Below, these factors are briefly profiled for Indiana, followed by a brief analysis of their role in economic development.

Population and Labor Force

—The size and age distribution of the population defines the size of the potential labor force. Indiana's 1980 population of 5.49 million was 2.42 percent of the U.S. population. In 1980, 55.9 percent of the state's population was in the prime labor force age group of 20-64, compared to 56.7 percent at the national level. The state had a slightly younger population in 1980 than the nation. While 32 percent of the U.S. population was under 19 years of age, 33.5 percent of the Indiana population was under that age.

—The size of the state's population in the prime labor force age-group combined with labor force participation rates determines the size of the labor force. The state's labor force was 2.61 million in 1980. The quality of the labor force may be measured by its educational attainment and its attitude toward work. About two-thirds of the Indiana and U.S. population over 25 years of age are high school graduates. However, at the national level, about 32 percent have had some college, while in Indiana about 24.3 percent of those over 25 years old have had some college. Indiana ranked 33rd lowest among the states in 1980 in percent of population with high school degrees, 47th lowest in percent of population with 1-3 years of college and 47th lowest among the states in percent of population with four or more years of college. In 1940, Indiana accounted for 2.24 percent of the nation's population with four or more years of college, and by 1980 the state accounted for only 1.80 percent.

—Worker attitudes may be measured in part by employee quit rates and work stoppage data. Manufacturing employee quit rates in Indiana have been below the U.S. rate in each of the years over the 1965-1980 period. Over the 1967-1979 period, manufacturing work stoppages in Indiana averaged 194 per year or 3.81 percent of the national total. During this period, Indiana manufacturing employment composed 3.65 percent of the nation's manufacturing employment. At the national level, the work stoppages resulted in the loss of 0.79 percent of the total manufacturing working days while in Indiana 0.85 percent of working days were lost due to work stoppages.

Unemployment

—The unemployed can be viewed as a source of readily available labor. Over the 1977-1980 period, annual unemployment averaged 177,000 in Indiana. The annual unemployment rate in Indiana was below the nation's in 1977 and 1978 but above the nation's in 1979 and 1980. About two in every three of those unemployed in 1980 in Indiana were unemployed for less than fourteen weeks. The state's unemployment rate was about twice as high among blue collar workers than white collar workers from 1977 through 1979 and more than three times higher in 1980. In 1980, blue collar workers accounted for 63.0 percent of the state's unemployed, while accounting for 40.8 percent of the state's labor force.

—The best record of those seeking work in Indiana is provided by those registered with the State's Job Service. Nearly two-thirds of those registered with Job Service are high school graduates or have had some college. Six in ten are between the ages 20 and 34, while this age group accounts for 45 percent of the state's overall population between 20 and 64.

Selected Resources

—Northern Indiana possesses very substantial water resources, while ground water availability is somewhat more limited in central and southern Indiana.

—Indiana communities over 10,000 population generally have considerable remaining unused capacity in their wastewater treatment and public water supply systems. Wastewater treatment capacity exceeds current annual average flow by at least 30 percent in 30 of the 58 Indiana communities of over 10,000 population. Public water supply treatment capacity exceeds current water usage by at least 30 percent in 40 of the 58 Indiana communities.

–There are a total of 114 landfills located in 77 Indiana counties. Four Indiana landfills will accept specialty/hazardous wastes.

Energy

–In 1979, Indiana produced 25 percent of the energy consumed within the state. The remainder is imported from out-of-state. As a result of the importation of a large amount of energy, large dollar amounts flow out of Indiana to pay for energy consumed. The net outflow of dollars from Indiana for energy has been estimated for each year during the 1960-1979 period. In 1960, the net outflow was $658 million or 5.05 percent of estimated Indiana Gross State Product. By 1979, the outflow had grown to $5,272 million or 9.25 percent of Indiana Gross State Product.

–The U.S. average monthly electric bills for a particular industrial service have ranged from $1,163 in 1969 to $4,128 in 1981, for a twelve year average monthly bill of $2,271. The Indiana average monthly electric bill for the same industrial service has ranged from $1,136 in 1969 to $2,623 in 1981, for a twelve year average of $1,784 per month. Based on the twelve year average monthly bill, an industrial consumer located in Indiana would have saved almost $490 per month or $5,900 per year. In addition, it appears that electric energy costs for industrial service in Indiana have generally fallen relative to the nation over the period.

–The U.S. average natural gas price for industrial service has ranged from $.35 per million BTUs in 1966 to $2.81 per million BTUs in 1980, for a fifteen year average price of $.98 per million BTUs. The Indiana average natural gas price for industrial service has ranged from $.41 per million BTUs in 1966 to $2.59 per million BTUs in 1980, for a fifteen year average price of $.96 per million BTUs. In 1966 the price of industrial service natural gas in Indiana was 117 percent of the U.S. average. By 1980 the price of industrial service natural gas was only 92 percent of the U.S. average.

Transportation

–Indiana has 12 interstate highways. Forty-two of the state's cities over 10,000 population are located less than 10 miles from an interstate interchange. All Indiana cities with a population over 10,000 with the exception of Greenfield have some rail service. General aviation air service is available from 53 airports located in 44 Indiana cities over 10,000 population. Most of the remaining cities are within easy driving distance of an airport.

–Indiana has two ports and is in the process of developing a third. Burns Water Harbor is located at the south end of Lake Michigan, the Southwind Maritime Centre is located on the Ohio River in the state's southwest corner, and the Clark Maritime Center is under development on the Ohio River in the state's southeast quadrant.

Industrial Park Space

–The state has 111 industrial parks with 22,700 acres. About 13,500 acres or 60 percent of the space is still available for development. Of the available acres, 3,494, or 26 percent, are fully serviced (rail, water, sewer).

A firm evaluating an Indiana location would likely find a readily available labor supply as suggested by the number of Indiana Job Service registrants. In addition, worker attitude appears generally favorable in Indiana as supported by low employee quit rates and work stoppage episodes only slightly above the national average. The work stoppage data suggest that the perception of Indiana as having a serious "labor problem" is probably inaccurate.

Quality of labor force is also related to its educational background. Here, there is cause for concern in Indiana. The lower percentage of the adult population with a college education in Indiana suggests it may be difficult to attract firms to Indiana which require a highly educated work force. This may become a more serious problem in the future as economic growth is expected to occur in industries which employ highly educated workers.

The state's mature transportation system includes ready access to the nationwide interstate highway system. Of concern is the number of Indiana's major communities that are served by only one rail-line. This suggests that government must be concerned about the future viability of these lines, and specifically their service to these one rail-line communities.

The ample availability of water in Indiana may become a more significant factor if expected water shortages materialize in other parts of the country. The state's communities also appear to have the additional unused capacity in their water and waste treatment facilities to handle additional industrial development. The availability of landfills to handle hazardous wastes will become a more important location factor as solid waste regulations are applied. The availability of such facilities should be a priority concern of government.

The net outflow from Indiana of over 8 percent of the state's Gross State Product for energy indicates that growth in the Indiana economy is being reduced by the flow of dollars out of Indiana. This outflow of funds for energy is a major economic development concern for Indiana.

Electric and natural gas costs for industrial service are very competitive in Indiana. This suggests that Indiana may be an attractive location for energy intensive industries.

Indiana has an ample supply of available, fully serviced industrial park space. Only in the southern part of the state does there appear to be any immediate need to consider additional space. In other areas of the state, the available supply of space suggests that communities should carefully assess the costs and likely benefits of additional industrial park space.

POLICIES, PROGRAMS, AND ACTIVITIES OF THE INDIANA DEPARTMENT OF COMMERCE

The Indiana Department of Commerce recognizes the essential fact of economic development that the decision made by an investor to commit resources to a particular investment project in a particular location is a decision best left to the private sector. Such decisions are generally made carefully, with due consideration given to ensure that the resources involved are being allocated efficiently. We do not subscribe to the approach which has led some states to engage in intense competition in offering huge subsidies to investors to induce favorable location decisions. Nevertheless, governments do have a role to play in enhancing the prospects of economic development and in ensuring the success of those investment projects which are undertaken within their borders. The economic development policies, programs and activities of the government of the State of Indiana must address the following ten elements.

Policy Analysis and Economic Research. Just as economic development requires the investment of private resources it also requires the investment of public resources. These public resources are in short supply in Indiana, and it is absolutely crucial that commitments of these resources be made only on the basis of well thought-out development policies based on competent research. The Department has in place two major research analysis activities. One is designed to produce recommendations for long-term economic development policies including policies related to infrastructure and capital improvements, industrial development, utilization of natural resources, taxation, energy development, conservation, and like issues. The second program is intended to provide focus for our immediate industrial development activities. The result of this activity is the identification of one or more industries on which the promotional activities of the department will be concentrated, and toward which the department will devote much of the other development resources available. These industries are being selected for their job generation potential, their growth prospects, their stability, and the degree to which their locational needs meet the attributes Indiana has. The first industry targeted to receive the special attention of the Department is the communications electronics industry.

Technology Innovation and Transfer. Technological change is the catalyst which can ignite an economic renaissance in the United States. New products, and old products produced in new ways, hold promise to be one key to long-term economic growth in this country, and more so in this region and state. Programs have been developed to help enhance and organize research activities in Indiana, to assist in the creation of private enterprise to develop the economic potential of that research, and to ensure that our existing industrial base has the best possible access to the latest technologies pertinent to each industry. Three efforts have been initiated. First, the Indiana Corporation for Science and Technology will function to draw together the human and financial resources of the government, private, and education sectors to encourage research and the development of technology-based industries in the state. Second, the Corporation for Innovation Development was created by the state as a private corporation to generate venture capital for investment in innovative business enterprises. Third, the Indiana Research Expense Credit provides a credit toward state corporate income tax liabilities for incremental expenditures on research.

Small Business Development. Much of the real employment growth in the economy is attributable to firms large enough to be financially stable yet small enough to respond quickly and creatively to changing conditions in high growth industries and/or markets. Accordingly, the state has established a Small Business Development Corporation to provide counseling, technical assistance, continuing education, and regulatory ombudsman services to small businesses at four regional sites throughout the state.

Natural Resources Development. The Department of Commerce, in conjunction with other state agencies, is working to develop a policy governing the development of natural resources in Indiana. The policy is intended to address a broad spectrum of natural resource issues, but will concentrate on two matters at the outset. First, the revenue outflows which result from the importation of energy into Indiana are a serious drain on our economic resources, and the Department is working to develop a policy to encourage the utilization of the entire range of energy resources available in Indiana in ways consonant with sound environmental management practices. Second, the availability of water may become a serious constraint on development in many areas of the country and an important development asset in Indiana. A policy is being developed which will permit Indiana to take full advantage of its abundant water resources without impinging on the health, safety, or recreational opportunities of the citizens of the state.

Manpower Development and Retraining. The economics of the state and the nation are in flux. New products and new production technologies are becoming increasingly prevalent. It is of critical importance that displaced workers and new entrants into the work force have the skills needed to make them employable. It is also essential that businesses have the pool of trained labor they need to operate successfully in Indiana. The Higher Education Commission, the Board of Vocational and Technical Education, the Indiana Office of Occupational Development, the Department of Public Instruction, and others are working to ensure that Indiana schools provide appropriate curricula, that retraining is available to the largest possible number of displaced workers, and that employers are offered a wide range of options to assist them in obtaining employees with the skills they require.

Transportation. One of Indiana's key economic strengths is the centrality of its location which gives businesses located here quick and easy access to materials and markets. Location alone is not sufficient to create that access. A well developed and well maintained transportation system is also necessary. A program of port development and road maintenance has been undertaken to ensure that publicly owned transportation facilities are more than adequate to meet the state's needs. The Department of Commerce has worked with the Legislature to establish an Industrial Rail Service Loan Fund to help ensure continuing rail service on lines threatened with cessation of service by Conrail.

Economic Development of Local Communities. The investment location decision is a commitment to a community, not a state. In order to enhance the ability of local communities to work with economic development prospects, and to help ensure the availability of suitable property, utility services, and transportation facilities, the Department has undertaken a multifaceted program to assist local communities in their economic development efforts. Included are such things as a program to help communities organize for economic development and identify development assets; a program to provide communities with financial assistance in their efforts to meet the needs of new or expanding businesses; a program to provide loans to communities, the proceeds of which may be reloaned to businesses to assist them in purchasing real or personal property; and a program to assist in the redevelopment of economically distressed urban areas.

Labor-Management Relations. The labor movement in Indiana has played an important role in the development of this state. It can play an even more important role in assisting in the solution of Indiana's economic problems. To ensure the greatest possible communication and cooperation between labor and management in Indiana a labor-management advisory council has been established by the Legislature and appointed by the Governor. The council is composed of equal representation from management and labor and it is intended that it will act to help resolve both short-term and long-term issues between the two groups.

Agricultural Development. The agricultural base of the state has an important stabilizing influence on the Indiana economy. It is also important because it serves as a major source of revenue inflows from beyond the state's borders. The Department has undertaken a major program commitment to improve the processing and marketing of agricultural products, and machinery and equipment produced here.

Business Climate. In a world of spiralling costs and prohibitive interest rates it is becoming increasingly important for state government to exhibit a reasonable degree of fiscal restraint to help reduce the tax burden on business and also to exhibit a willingness to assist businesses in obtaining the financing necessary to enable firms to locate or expand here. Among tax initiatives established recently are the adoption of the accelerated cost recovery system of depreciation allowances which was recently written into federal law; an abatement of property taxes for investment in real property and machinery in urban development areas; and the aforementioned tax credit for research expenditures. A wide range of programs is available to the Department to assist businesses in obtaining capital at reasonable cost. Among these programs are:

> –The Indiana Development Commission, which may guarantee loans, issue single project industrial revenue bonds, issue multipurpose industrial revenue bonds to fund pooled financings, and guarantee industrial revenue bonds issued by local government units.
>
> –The Indiana Investment Incentive Program, which provides grants to municipalities which may be loaned to private entities for certain economic development purposes.
>
> –The Corporation for Innovation Development described earlier.

CONCLUSION

The programs and policies enumerated above were the outgrowth of the recognition that the economy of the State of Indiana has serious problems. Those problems are not insoluble. However, their solution will require the cooperation and concerted efforts of business, labor, government, education, and the community at large. The most important role of state government is to ensure that conditions exist in the state which encourage the development of its economy and with that the health and welfare of its citizens. To carry out that role the Legislature, the Administration, and the Department of Commerce have worked to create innovative responses to the new economic circumstances that Indiana faces. The problems are not yet solved, but the state has a much better array of tools than ever before to help in their solution.

Indiana's Business

RECESSION'S WIDESPREAD IMPACT

Of all the fifty states, Indiana had the least growth in personal income in the past year. The extent of Indiana's dramatic difficulties in the recent recession are revealed by an examination of the latest personal income data from the U.S. Bureau of Economic Analysis.

In all but one small sector, Indiana trailed the national performance during this period of time. A 3.3 percent increase in income generated through Agricultural Services, Forestry, and Fisheries within the state exceeded the national increase of 2.4 percent; this small sector, however, accounted for only 0.2 percent of the state's earned income. Income from farming was down by 22 percent in this state compared with a national decline only one-fourth as severe (see Table 1). But the greatest differential between Indiana and the nation was in Mining, which fell by 2.4 percent in the Hoosier state while advancing by 16.5 percent nationally. Durable goods production in Indiana also ran counter to the national pattern. For the whole country, income derived from manufacture of durable goods rose by 2.8 percent; in Indiana this sector declined by 3.8 percent. Wholesale trade was the only other Indiana sector to move contrary to the national pattern, falling by 0.8 percent here while rising by 6.6 percent nationally.

Construction was the only sector in the nation to experience a decline in nominal values for earned income during the period. A 0.6 percent decline across the nation was well exceeded by Indiana's decline of 7.4 percent. In all, earned income (labor and proprietors' income) from private sector employment declined in Indiana by 0.1 percent while the nation saw an increase of 6.1 percent. Government generated earnings did rise in Indiana by 4.1 percent, but increased nationally by 7.4 percent. In terms of federal civilian and military earnings, the state trailed the nation more than it did state and local contributions to earnings.

Dividends, interest, and rent are fast growing components of personal income, rising by 15.6 percent nationally. But Hoosiers realized an increase of only 13.1 percent in this area.

Transfer payments, which are largely intended to offset economic distress, seemed to be doing just that job, growing at a faster rate than in the nation as a whole.

From the first quarter of 1981 to the same quarter of 1982, total personal income in the United States rose by 8.2 percent, but climbed by only 3.9 percent in Indiana. (All figures are nominal; that is, they reflect unadjusted changes in price level.) Of all the Great Lakes states, Indiana's record was the poorest for this period. As expected, the Great Lakes had the poorest record of all nine regions in the nation (see Table 2).

Indiana's economic performance during the first quarter of 1982 was superior to neighboring Illinois (0.4 percent vs. 0.1 percent). The Hoosier state did grow faster than Michigan in the third and fourth quarters of 1981. There is little solace, however, in such short-term advantages.

Table 1

COMPARATIVE CHANGES IN PERSONAL INCOME—1981:1 TO 1982:1

	Indiana	*United States*	*Difference Indiana-United States*
Farm	–22.2%	–5.4%	–16.8%
Non-Farm	+0.4%	+6.3%	–5.9%
Private	–0.1%	+6.1%	–6.2%
Ag., Serv., For., Fish, & Other	+3.3%	+2.4%	+0.9%
Mining	–2.4%	+16.5%	–18.9%
Construction	–7.4%	–0.6%	–6.8%
Manufacturing	–1.8%	+3.8%	–5.6%
Nondurable Goods	+5.1%	+5.8%	–0.7%
Durable Goods	–3.8%	+2.8%	–6.6%
Transportation and Public Utilities	+0.2%	+6.8%	–6.6%
Wholesale Trade	–0.8%	+6.6%	–7.4%
Retail Trade	+0.9%	+4.8%	–3.9%
Finance, Insurance, and Real Estate Service	+4.0%	+7.8%	–3.8%
Services	+6.4%	+10.2%	–3.8%
Government	+4.1%	+7.4%	–3.3%
Federal, Civilian	+2.8%	+6.9%	–4.1%
Federal, Military	+9.7%	+16.2%	–6.5%
State and Local	+4.2%	+6.4%	–2.2%
Total Labor and Proprietors' Income	**+0.1%**	**+6.1%**	**–6.0%**
Derivation of Personal Income By Place of Residence	+13.1%	+15.6%	–2.5%
Transfer Payments	+13.5%	+10.8%	+2.7%
State U.I. Benefits	+19.8%	+17.4%	+2.4%
Transfers Excl. State U.I.	+13.2%	+10.5%	+2.7%
TOTAL PERSONAL INCOME	**+3.9%**	**+8.2%**	**–4.3%**

The record of the coming year, in which some recovery is anticipated, should show the Hoosier state ahead in selected areas. If we just keep pace with the nation, however, we will be doing better than we have for some time past.

Morton J. Marcus

Table 2

PERCENT CHANGE IN PERSONAL INCOME—1981:1 TO 1982:1

UNITED STATES	8.2	*REGIONS*	
		Northeast	8.2
SELECTED STATES		Middle Atlantic	8.3
Indiana	3.9		
Illinois	5.8	East North Central (Great Lakes)	5.6
Michigan	5.5	West North Central	7.5
Ohio	6.1	South Atlantic	8.7
Wisconsin	5.8	East South Central	7.1
Kentucky	7.2	West South Central	11.1
California	12.2	Mountain	9.6
New York	8.9	Pacific	9.2

MAN-HOURS IN INDUSTRIAL PRODUCTION
(Seasonally Adjusted Data)

	United States				Indiana			
	Latest Month (millions)		Percent Change From		Latest Month (thousands)		Percent Change From	
			One Month Ago	One Year Ago			One Month Ago	One Year Ago
Manufacturing	**June**	**739.5**	**0.2**	**−9.0**	**May**	**23,383.8**	**−2.6**	**−12.5**
Food	June	63.6	0.7	−2.7	May	1,462.1	4.5	−2.2
Apparel and textiles	June	70.0	−2.6	−12.8	May	380.1	3.4	−11.0
Lumber and wood	June	24.4	−0.1	−9.6	May	625.2	0.3	−19.6
Furniture	June	16.2	−0.1	−9.3	May	627.1	−4.1	−18.3
Paper	June	26.7	−2.3	−7.0	May	536.9	4.4	−8.2
Printing	June	45.3	−3.2	−4.0	May	1,108.6	0.2	−2.4
Chemicals	June	44.5	−0.6	−5.3	May	1,315.5	0.2	2.9
Petroleum and products	June	9.1	1.1	−2.9	May	178.5	5.9	−15.0
Rubber and plastics	June	28.0	−0.5	−9.0	May	1,198.3	1.6	−7.9
Stone, clay and glass	June	24.2	1.5	−10.9	May	847.7	3.0	−8.9
Primary metals	June	36.6	0.6	−21.4	May	3,418.2	−8.4	−17.5
Fabricated metals	June	57.6	−0.2	−11.2	May	1,931.7	−2.7	−10.9
Nonelectrical machinery	June	91.6	−4.2	−10.5	May	2,559.0	−1.2	−15.3
Electrical machinery	June	79.9	−0.4	−5.5	May	3,739.6	1.3	−13.6
Transport equipment	June	72.5	−0.6	−7.0	May	3,023.6	−1.3	−12.5

MORE DATA FROM THE 1980 CENSUS: SECOND SUMMARY TAPE HAS GREATER DETAIL THAN FIRST

The Indiana State Data Center has received Summary Tape Files 2A and 2B from the 1980 Census. These two STF series furnish data down to the level of census tracts and places of 1,000 or more and present more numerous and detailed tabulations of complete-count (100 percent) data than are found in STF1. The computer tapes are the source of data which appear in the General Population Characteristics reports, Detailed Housing Characteristics, and the complete count tables of census tract reports.

STF 2A provides data for states, SMSAs, counties, places of 10,000 or more and census tracts. STF 2B presents data for states and selected areas down to places of 1,000 or more. The data are presented for the total population and by race and Spanish origin and provide more detail than previously available. For example, age is presented by single years to age 99, cross-tabulated by sex (table B8). The Indiana State Data Center has that table available in paper copy for the state and the 92 counties.

For more detail on STF 2 or other census products and services of the Data Center contact us by writing or calling:

INDIANA STATE DATA CENTER
Indiana State Library
140 N. Senate Ave.
Indianapolis, IN 46204
(317) 232-3735 or 232-3733

INDIANA INDUSTRIAL ELECTRICITY SALES
(Seasonally Adjusted in Millions of Kilowatt Hours)

	June 1982	*May 1982*	*June 1981*	*Percent Change From One Month Ago*	*Percent Change From One Year Ago*
Anderson	20.2	19.6	18.7	3.1	4.8
Bedford	12.0	12.0	16.9	0	–29.0
Bloomington	4.5	4.3	3.5	4.7	28.6
Columbus	19.1	17.9	24.4	6.7	–21.7
Connersville	9.3	8.2	9.3	13.4	0
Crawfordsville	10.3	10.4	10.3	–1.0	0
East Chicago	20.3	21.0	26.6	–3.3	–23.7
Elkhart	21.2	23.9	23.5	–11.3	–9.8
Evansville	47.3	45.0	45.1	5.1	4.9
Fort Wayne	42.5	44.1	52.2	–3.6	–18.6
Frankfort	8.5	8.4	9.0	1.2	–5.6
Gary	130.2	133.9	167.1	–2.8	–22.1
Goshen	9.0	8.5	9.1	5.9	–1.1
Hammond	59.1	58.8	59.4	.5	–.5
Huntington	4.6	4.5	4.0	2.2	–6.1
Indianapolis	346.7	313.8	341.1	10.5	1.6
Jeffersonville	5.2	5.3	6.5	–1.9	–20.0
Kokomo	61.0	64.2	71.9	–5.0	–15.2
Lafayette	36.4	37.6	39.3	–3.2	–7.4
LaPorte	13.8	13.6	15.4	1.5	–10.4
Logansport	7.4	7.6	9.5	–2.6	–22.1
Madison	2.3	2.3	2.4	0	–4.2
Marion	31.6	33.0	33.7	–4.2	–6.2
Michigan City	42.4	45.1	47.9	–6.0	–11.5
Mishawaka	3.7	3.6	NR*	2.8	–
Muncie	13.7	14.3	18.3	–4.2	–25.1
New Albany	5.1	4.8	5.0	6.3	2.0
New Castle	7.5	7.7	8.5	–2.6	–11.8
Peru	4.7	5.1	4.9	–7.8	–4.1
Richmond	25.5	21.5	26.8	18.6	–4.9
Seymour	2.4	2.3	2.6	4.3	–7.7
South Bend	26.7	29.9	28.1	–10.7	–5.0
Terre Haute	25.4	24.8	33.1	2.4	–23.3
Valparaiso	8.8	8.8	9.1	0	–3.3
Vincennes	2.8	2.8	2.6	0	7.7
Wabash	6.8	6.4	7.6	6.3	–10.5
Indiana	**1,740.6**	**1,704.0**	**1,895.6**	**2.1**	**–8.2**

*Not reported.
SOURCES: Data provided monthly by public and municipal electric companies.

UNITED STATES–INDIANA BUSINESS INDICATORS*

(Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100)

		United States				*Indiana*		
		Latest Month	*Previous Month*	*One Year Ago*		*Latest Month*	*Previous Month*	*One Year Ago*
EMPLOYMENT								
Nonagricultural employment	June	136.8	137.0	138.7	June	113.4	114.3	119.1
Manufacturing employment	June	97.5	98.3	104.6	June	83.4	83.8	93.1
Average weekly hours (No.)+	June	39.2	39.0	40.2	June	39.6	39.2	40.6
Average weekly earnings ($)+	June	333.59	329.55	320.39	June	388.08	381.81	379.20
Nonmanufacturing employment	June	152.9	153.0	152.7	June	133.8	134.6	136.7
Unemployment rate (%)	June	9.5	9.5	7.4	June	11.3	12.0	9.8
Unemployment-married males (%)	June	6.5	6.1	4.2	–	–	–	–
Continued unemployment claims	June	–	–	–	June	552.1	432.7	650.7
PRODUCTION								
Bituminous coal production	May	148.4	156.4	75.8	–	–	–	–
Industrial electricity production	Mar.	135.1	136.0	152.1	–	–	–	–
Industrial electricity sales	–	–	–	–	June	150.3	148.6	163.3
Manufacturing production	June	137.3	138.2	152.4	June	137.9	136.5	152.4
Raw steel production	June	57.1	58.6	98.4	June	90.0	97.9	138.3
CONSTRUCTION								
Construction activity-Total	May	295.8	292.1	311.0	June	191.8	184.2	209.6
Residential housing starts	June	70.9	83.7	81.4	June	67.8	39.8	65.0
Residential expenditures	May	295.5	285.6	353.4	June	173.6	171.9	233.6
Nonresidential expenditures	May	296.0	295.2	290.3	June	176.1	179.9	216.8
Public expenditures	May	191.8	198.4	202.0	–	–	–	–
Public works and utilities	–	–	–	–	June	226.4	196.7	145.6
OTHER INDICATORS								
Personal income per capita ($)	May	11,012.1	10,941.2	10,360.9	82:1	9,887.0	9,839.0	9,484.0
Passenger car sales (thousands)	June	651.0	774.0	724.0	May	15.6	13.2	15.8
Year to date (thousands)	June	4,039.0	3,388.0	4,584.0	May	62.7	47.1	81.6

*Current indicators are preliminary and subject to revision.

+Not seasonally adjusted.

SOURCES: Data on Indiana construction from McGraw-Hill Information Systems Company; Indiana passenger car registration from R.L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

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Educational Attainment and Retention in Indiana

In this issue . . .

Economic development starts with the people. Is Indiana experiencing a "brain drain" which could retard our future? Do the people support economic development? These two topics are explored in this issue. The first topic is examined by reference to data for 1979, the latest information available. The second topic is addressed specifically to the Terre Haute community. Community support for economic development may offset some of the loss in human resources.

A review of the first seven months of Indiana's business suggests little progress toward recovery. Readers are cautioned to avoid extrapolation of the negative past as well as a too early optimism which declares, "It can't get worse."

Morton J. Marcus,
Editor

INDIANA BUSINESS REVIEW

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In today's competitive economic environment, states are most concerned with the resources they have to attract and hold business prospects. Among the most important resources are the men and women with contemporary skills and the knowledge to acquire new skills. Their educational characteristics have become critical components in planning a state's economic development.

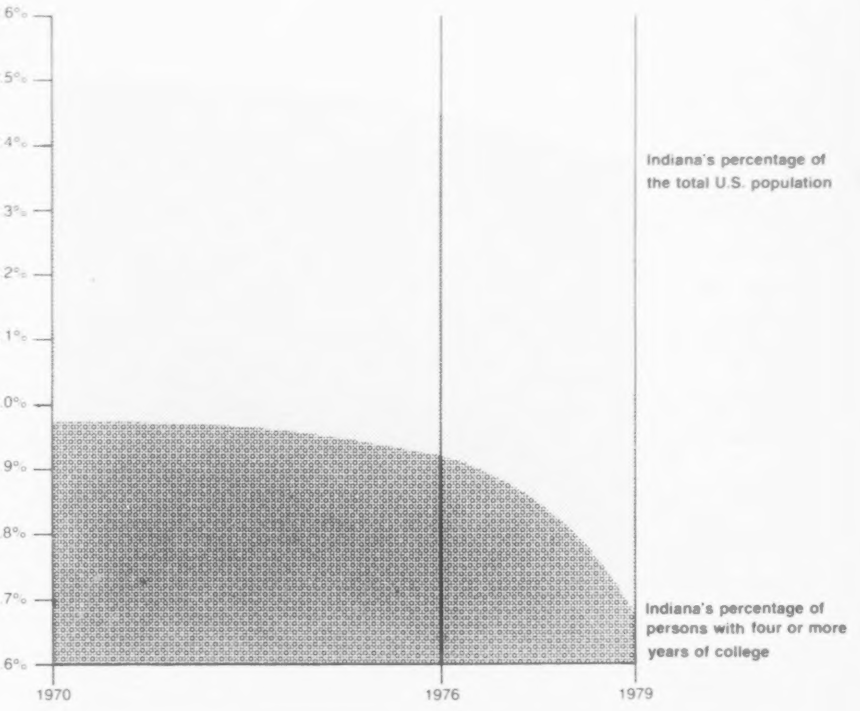
The data have yet to arrive from the 1980 Census of Population which would allow a detailed discussion of the often mentioned "brain drain" from Indiana. We can, however, use 1979 data to illustrate the contention that Indiana's educational status lags the nation and may be deteriorating.

The past decade, as shown in Figure 1, witnessed a decline in Indiana's share of the nation's population from 2.51 percent to 2.38 percent. The decline in our state's share of persons with four or more years of college, however, was even more dramatic, falling from 1.97 percent to 1.68 percent.

Figure 2 shows the percent of the population having completed four or more years of college, for Indiana and the United States as a whole. In all age groups, Indiana trails the nation. The gap among the 35 to 44 year old population is of particular note, since this group might be expected to offer high levels of productivity and entrepreneurial effort. Given that the educa-

Figure 1

INDIANA'S DECLINING SHARE



tional attainment for the group of persons 45 to 54 years old in Indiana (11.8 percent) is higher than for the 35 to 44 group, (10.4 percent) we may imagine a sharp outward flow of the state's college-educated population. Without detailed migration data, the brain drain hypothesis can only be suggested, not proven. But we would expect that Indiana would have a smoother curve similar to the national pattern, if not for some strong divergent force.

One possibility is that Hoosiers now age 35 to 44 were well below the national level in educational attainment when they were younger, at age 25 to 34. In Figure 2 we see that in 1979 those 25 to 34 are about five percentage points behind the nation in college completion. In Figure 3 we see a similar five percentage point differential between Indiana and the nation for persons 25 to 34 in 1970. When this cohort of persons in Indiana had reached ages 35 to 44 in 1979, the differential with the U.S. had increased to nearly ten percentage points. During the decade in which this cohort across the nation was increasing its educational attainment, there was a decline in Indiana. Although education itself may atrophy, years of school cannot be lost. The Hoosier decline in percent of population age 35 to 44 with four or more years of college can be ascribed either to:

1. Growth in Indiana's population age 35 to 44 made up of a large number of persons with less than four years of college (a most unlikely event), or;

2. A decline in the number of persons with four or more years of college through out-migration (the more likely event) or higher death rates.

If we reject the idea that higher education increases mortality, we are left to believe that persons with four or more years of college have been leaving Indiana to use their educational capital in other, more promising economic areas.

During the past decade, this crucial cohort, persons in their thirties, were adding to their educational attainment as seen by the upward slope of the national curve in Figure 3. Through night courses and part-time attendance, persons with four or more years of college increased as a portion of the nation's population. If Hoosiers followed the same pattern of adding to educational attainment, then the lower incidence of college completion

Figure 2

PERCENT OF PERSONS WITH FOUR OR MORE YEARS OF COLLEGE (1979 FIGURES)

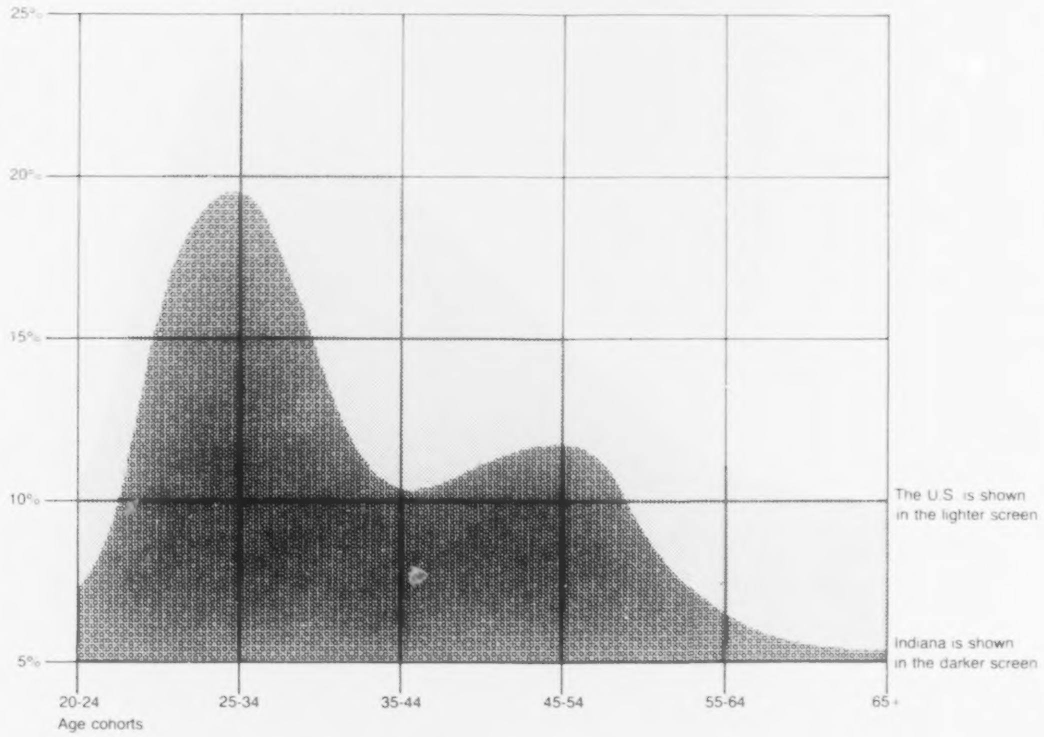
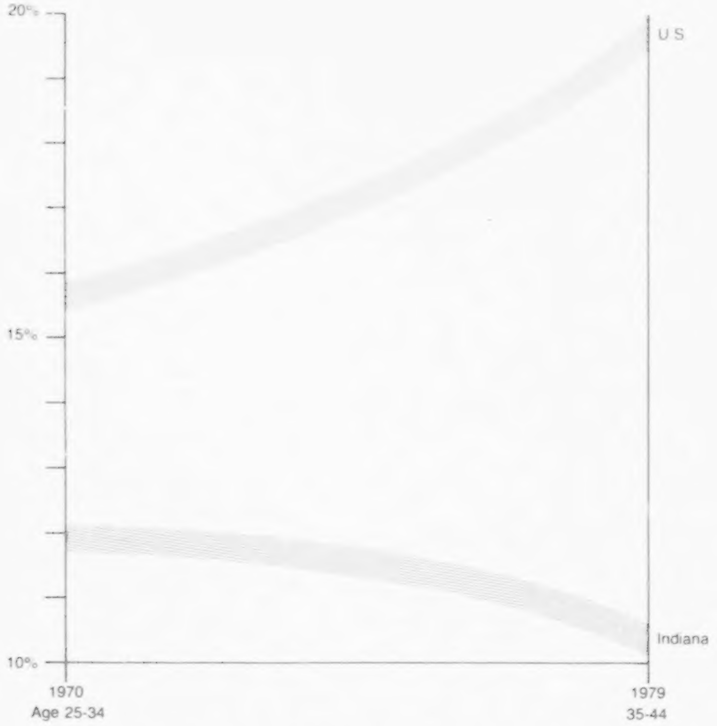


Figure 3

PERCENT OF PERSONS WITH FOUR OR MORE YEARS OF COLLEGE FOR A SINGLE COHORT



shown by the falling line in Figure 3 represents investments made by students, their companies, and the citizens of Indiana which will be returning benefits to other communities in other states.

A jingoistic attitude would view such out-migration of educational capital as a waste of the state's resources. A more realistic approach would regret the lost opportunities for Indiana, but take comfort in the knowledge that we have prepared our citizens to be effective, perhaps even well-paid, albeit elsewhere.

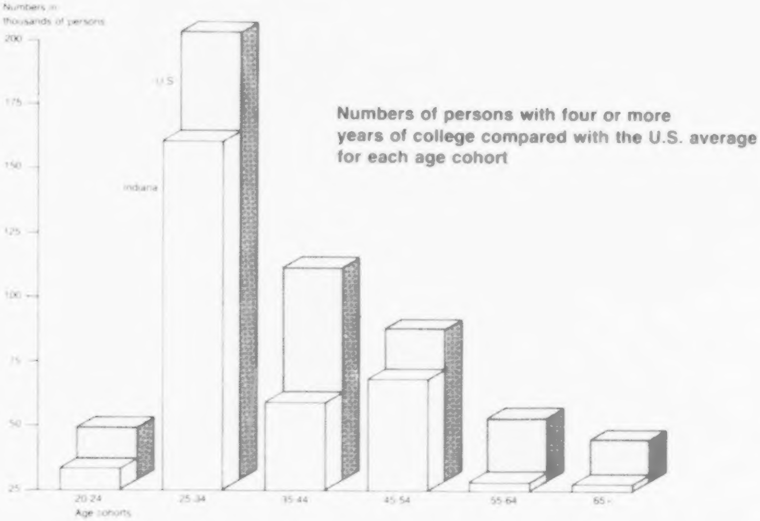
We can see in the clear bars of Figure 4 the number of persons with four or more years of college in Indiana by age group. If Indiana had the same incidence of persons with four or more years of college as the nation, then we would have the number of persons shown by the darker bars. The distance between the Indiana experience and the national average as applied to the Hoosier state is shown more dramatically as a deficiency in Figure 5. Here each bar shows how many more Hoosiers, in each age group, there would have been in Indiana had we the same incidence (percentage of persons with four or more years of college) as the nation. This deficiency or educational deficit totaled 163,600 persons in 1979.

How can we interpret such a number? One way would be to say that an additional 163,600 Hoosiers currently living in the state would have four or more years of college if we kept up with the nation. If we believe that economic development is aided and encouraged by the presence of a well-educated populace, this deficiency is not just a loss for those 163,600 Hoosiers, but for all of us who fail to realize the gains in income, involvement, and knowledge which these citizens could offer.

There is a partnership between persons of different attributes. In the so-called high-tech states of California and Massachusetts, there is a one-to-one relationship between persons with less than four years of high school and those with four or more years of college. In the U.S. in general, and Illinois and Missouri specifically, there are two persons with less than four years of high school for each person with four or more years of college. In Indiana, the ratio is three to one. If education brings benefits of advanced job opportunities, higher community income and greater support for public services, then the people of Indiana with less than a high school education have fewer complementary resources (college-educated persons) with whom to build for the future.

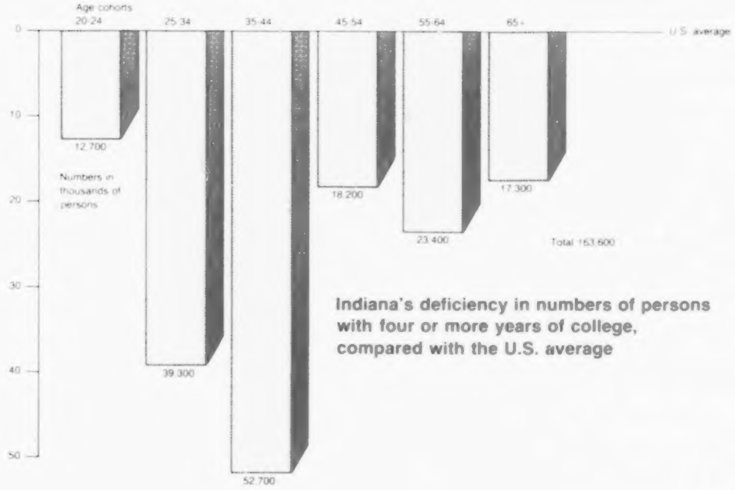
Note: This article features graphics developed by Marcia Busch-Jones from data prepared by Harrison Ullman using materials from the U.S. Bureau of the Census, *Current Population Reports*, Series P 20 #356.

Figure 4



Numbers of persons with four or more years of college compared with the U.S. average for each age cohort

Figure 5



Indiana's deficiency in numbers of persons with four or more years of college, compared with the U.S. average

Community Attitudes Toward Industry in Terre Haute

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The successful location of an industrial establishment in a community can realistically be viewed as a matching process. Not only must the needs of the establishment for competitive costs and market access be served, but the needs of the community must also be protected. Certainly, the attraction of new establishments to an area should not result in deterioration of the economic, cultural, political, and environmental conditions in the community.

Individual attitudes toward specific industrial impacts vary widely. Further, given that differences exist among communities, composite local attitudes toward industry may also be assumed to vary. What may be broadly acceptable in one community may stimulate hostility and resistance if introduced into another. An unwanted establishment may quickly face tax, zoning, building code, urban service, and labor supply problems as its local impacts are progressively felt.

Allusions to the importance of local attitudes are scattered through the literature, and occasionally reference is made to their consideration as a factor in plant location efforts. However, only two recent studies have dealt directly with the issue of local attitudes in industrial development. One assessed University of Nebraska student attitudes toward industrial location in Nebraska,[1] and the other assessed community attitudes toward industrial development in "a West Texas community." The latter dealt with industry preferences, development policy preferences, and acceptability of new industry.[2]

With little available prior research, the Terre Haute case study was undertaken to provide an expanded perspective on the

Table 1

EVALUATION OF POSSIBLE INDUSTRIAL IMPACTS

Rank	*Potential Impact (Groupings)**	*Mean Score*
1.	Provides jobs for local people (C)	4.287
2.	Provides new employment (E)	4.247
3.	Attracts new people to area (C)	4.180
4.	Reduces unemployment (C)	4.151
5.	Generates new construction (E)	4.135
6.	Adds to area professional population (C)	4.068
7.	Stimulates other area business (E)	4.026
8.	Attracts still more industry to area (E)	3.987
9.	Results in improved local school (C)	3.958
10.	Results in increased cultural activities (C)	3.893
11.	Provides minority job opportunities	3.893
12.	Provides above average wages (E)	3.826
13.	Adds to local tax base (E)	3.813
14.	Stimulates urban growths (E)	3.797
15.	Interlinks with other area industry (E)	3.394
16.	Generates urban growth (C)	3.721
17.	Increases area land values (E)	3.711
18.	Creates job security thru unions (C)	3.552
19.	Adds to demand for urban services (P)	3.531
20.	Adds to "labor" vote in the city (P)	3.391
21.	Results in annexation of outlying areas (P)	3.300
22.	Adds to union strength in area (P)	3.234
23.	Requires modification of building codes (P)	3.232
24.	Increases local housing costs (E)	3.227
25.	Requires zoning changes (P)	3.221
26.	Influences local political decisions (P)	3.148
27.	Increases stress in community life (C)	3.094
28.	Requires community financed development efforts (P)	3.078
29.	Requires tax concessions to come to area (P)	3.029
30.	Restricts use of adjoining land (P)	2.977
31.	Increases rail traffic (En)	2.750
32.	Increases traffic congestion (En)	2.594
33.	Occupies scarce land (En)	2.552
34.	Increases urban noise (En)	2.406
35.	Creates unattractive areas (En)	2.365
36.	Generates dust (En)	2.302
37.	Involves hazardous processes (En)	2.258
38.	Generates water pollution (En)	2.225
39.	Generates air pollution (En)	2.208
40.	Generates odors (En)	2.148

*(C) Cultural, (E) Economic, (P) Political, (En) Environmental.

nature of community-wide attitudes toward industry. (Funding for the research was provided by the Indiana State University Research Committee.)

THE ANALYSIS

Three basic questions should be posed in an analysis of community attitudes toward industry. First, does the community want new industry? Second, how would the community evaluate various types of possible industrial impacts? And third, what does the term "industry" mean to the community? A questionnaire was developed to resolve these questions. Responses were obtained from a random sample of 384 Terre Haute residents during July and August of 1980. The sample is sufficient to generate statistically valid results.

The residence sample was developed by random selection from the telephone directory. For each individual selection the directory page number and then the specific listing on the page were identified with the use of a table of random numbers. A mailing of 500 questionnaires generated 91 completed responses. Direct interviews provided results from another 293 individuals. When respondents were not at home at a selected residence, the one "to the right" was selected. For example, in dealing with single family homes, the next house to the right on the block would be selected when facing the sample house from the street.

WOULD YOU LIKE TO SEE NEW INDUSTRY DEVELOPED IN TERRE HAUTE?

Respondents were asked to provide a yes or no reaction to the prospect of new industrial development in the community. The response was overwhelmingly favorable with 362 of 384 respondents answering yes. This response, with 94 percent of the sample favoring new industry, would seem to indicate an exceptional level of local support for new local industrial development.

Table 2

ASPECTS OF INDUSTRY RECOGNIZED BY TERRE HAUTE RESPONDENTS

Aspect	*Number of Responses*		*Percent*
Positive Impacts		288	55.0
Employment	198		
Community economic growth	40		
Community improvement	21		
Less crime	11		
Generates tax revenues	7		
Other	22		
Activity		161	30.7
Manufacturing (production of goods)	95		
Business, commerce	38		
Provision of services	19		
Other (retail, trade, etc.)	9		
Facility		50	9.5
Factory, plant	44		
Other	6		
Negative Impacts		25	4.8
Environmental	22		
Cultural (crime)	3		
Total		524	100.0

HOW DO YOU EVALUATE POSSIBLE INDUSTRIAL IMPACTS?

On the questionnaires, respondents were asked to rate each of forty possible industrial impacts on a five point scale ranging from very good to very bad. Economic, cultural, political, and environmental groupings were indicated, with ten possible impacts listed under each heading.

The ratings were tallied for each impact and then converted into scores. Very good ratings were scored 5, good 4, average 3, bad 2, and very bad 1. The mean score for each impact was then calculated and the impacts rank ordered in terms of their means (see Table 1). Graphing of the mean scores suggested boundaries between groups of impacts would be appropriate at mean scores of 3.4 and 2.8.

The mean scores in the highest group ranged from 3.531 to 4.287. Relating almost exclusively to the economic and cultural impacts of industrial employment and to impacts resulting in area growth, the group impacts are viewed as potentially favorable in Terre Haute. Clearly, area employment and growth resulting from new industry would be well received locally.

The middle group of potential impacts had mean scores ranging from 2.977 to 3.391. Most of the impacts in this group were political and most exhibited slightly positive ratings (slightly above 3.0). Thus, the possible political impacts of local industrial development would be viewed with mild approval in the Terre Haute area. Increases in local housing costs and increased community stress were classed with the political impacts, even though their effects upon the respondents might well be negative.

Predictably, possible environmental impacts generated negative responses and exhibited means ranging from 2.148 to 2.650. The environmental impacts comprise a group which would contribute to a deterioration of the quality of life in the area and this is clearly understood by the area population. However, variation in the degree of opposition to the different environmental impacts is obvious from the in-group mean scores. Although increased rail traffic and traffic congestion are not viewed as desirable, they might well be tolerated; the prospect of significant new odor problems, air or water pollution, or introduction of hazardous processes would be much more likely to generate significant local opposition.

WHAT DOES THE TERM "INDUSTRY" MEAN TO YOU?

Questionnaire respondents were asked to indicate the meaning to them of "industry" and 84 percent (323 of 384) did so. The responses ranged from a single word to two or three sentences in length. In analyzing the answers each expressed concept was considered a response and a single respondent could be credited with several "answers." Thus, "jobs in a manufacturing plant" would be considered recognition of 1) employment, 2) the manufacturing process, and 3) the physical facility. The results are summarized in Table 2.

The dominant single characterization (55 percent) was that industry generated positive impacts and, more specifically, employment. This was seen as resulting from manufacturing or other economic activity (by 30.7 percent) sited in a factory or plant (by 9.5 percent). Despite just having rated a number of unwanted environmental impacts, the negative aspects of industrial development represented less than 5 percent of the characterization of "industry" by the respondents.

To the resident of Terre Haute the term "industry" suggests jobs, area growth, and other local benefits. This view dominates the local perception of industry and would seem to be the basis for the very positive local reaction to the prospect of area industrial growth. The positive aspects of such growth are far more clearly perceived than the problems it might generate.

CONCLUSIONS

From the present analysis, the residents of Terre Haute, Indiana appear to be highly receptive to the prospect of new industry locating in their community. Employment and growth are overwhelmingly seen as the results of industrial attraction. Negative impacts are, of course, not desired. Opposition to new local problems of industrial odors, air and water pollution, and hazardous processes might become intense. Despite this, 95 percent of the area population would support the development of new industry within the Terre Haute area. This support should be a very positive element in the success of local industrial attraction efforts.

1. Raymond Hubbard, "The Measurement of Perception and Attitudes Toward Industry," *The Geographical Bulletin*, Vol. 4, April 1972, pp. 216-223.

2. Robert T. Green and Grady D. Bruce, "The Assessment of Community Attitudes toward Industrial Development," *Growth and Change*, Vol. 7, January 1976, pp. 28-33.

Indiana's Business

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RECENT BUSINESS ACTIVITY

The cumulative picture of the state's economy through July of this year offers little encouragement to the business community. If a turnaround is at hand, there is no evidence in the figures thus far available for Indiana. The following notes may be useful in the future to indicate how far down this recession has brought various sectors of the state.

Note: All data in the following paragraphs have been adjusted for seasonal variations.

HOUSING STARTS

Through July of this year housing starts have totalled 8,750 units. This is 39.8 percent below the 14,537 units started during the same period last year, and 18.9 percent below the January through July period of 1980 (10,791 units). The performance of housing in Indiana so far this year appears even more bleak when compared with the same period of 1979 and 1978 (21,310 and 26,918 starts, respectively). As of July 1981 housing starts are 58.9 percent below 1979 levels, and 67.5 percent below 1978 levels. If housing continues in this year at its current rate, total starts would reach only 14,100, the lowest level since 1955. See figure 1.

TOTAL CONSTRUCTION ACTIVITY

As of July, total construction activity in Indiana has amounted to $1.40 billion. This is 18.6 percent below the 1981 level of $1.72 billion, and 25.9 percent below the 1980 level of $1.89 billion. Compared to the same period of 1979 and 1978, this year so far is 57.6 percent below 1979 (3.30 billion) and 52.4 percent below 1978 (2.94 billion). These year-to-year comparisons do not consider the effects of inflation, indicating that the real level of activity in construction is down even further.

RAW STEEL

Indiana's raw steel production through July of this year amounted to 10.24 million tons. This represents a 25.7 percent decline compared to the same period in 1981 (13.78 million tons) and a 7.2 percent decline when compared to the January through July period of 1980 (11.03 million tons). The current year's total raw steel production is 27.0 percent below the same period in 1979 (14.03 million tons), and is 24.3 percent below the 1978 level (13.53 million tons).

Figure 1

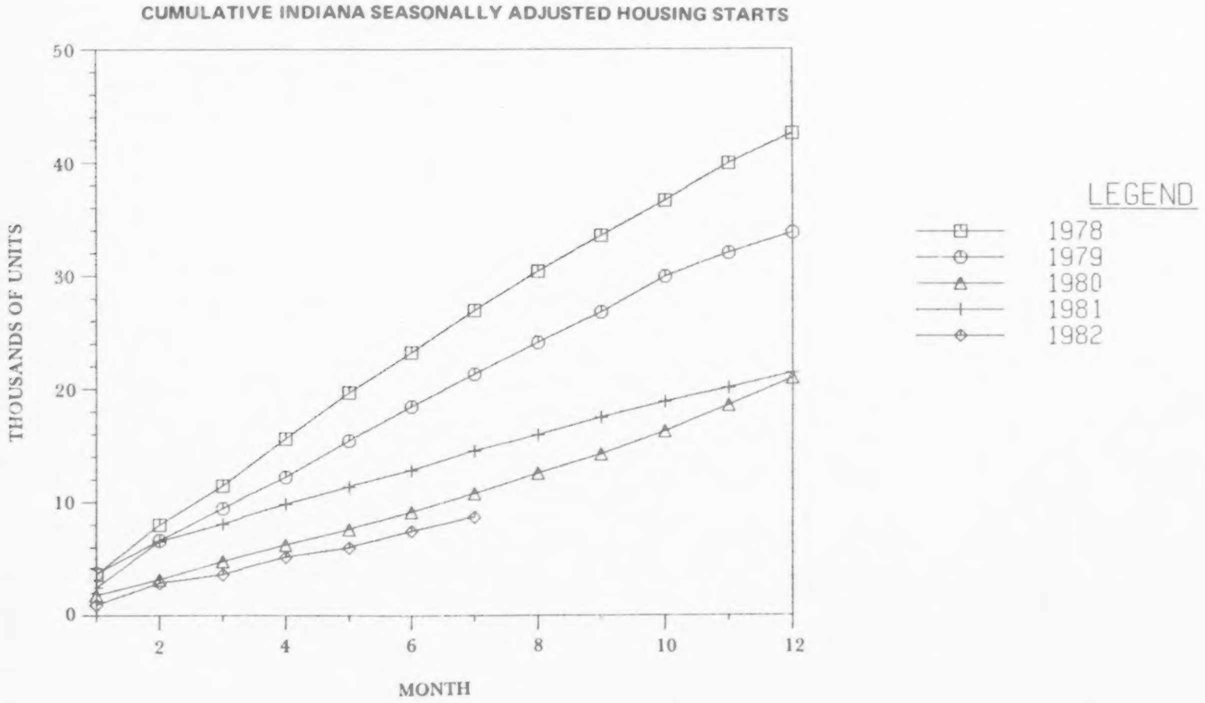
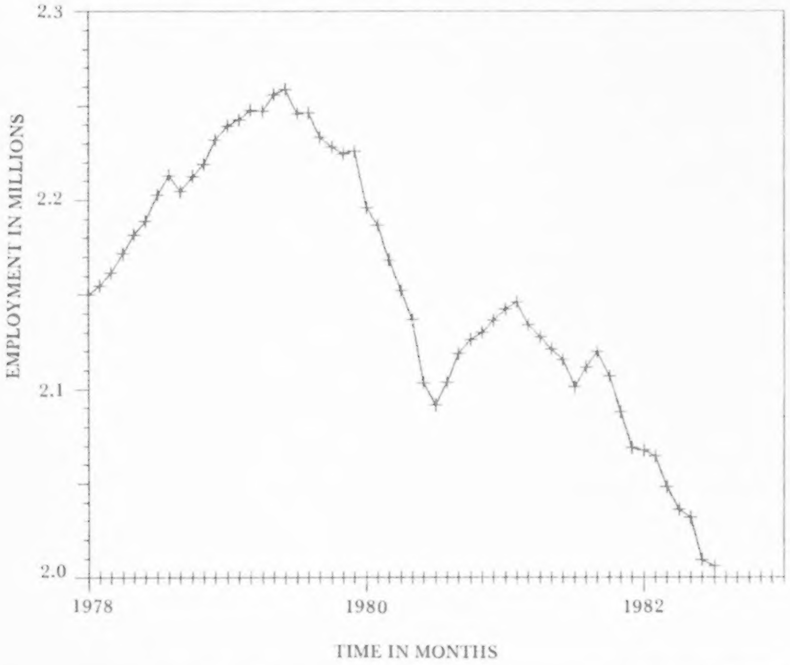


Figure 2

INDIANA SEASONALLY ADJUSTED NONAGRICULTURAL EMPLOYMENT



While steel production is continuing to decline in Indiana, the state has faired better than the rest of the nation. Over the period of July 1978 to July 1982 U.S. steel production declined 48.8 percent, while Indiana's steel output dropped by only 33.1 percent for the same period. As of July, Indiana is the leading raw steel producing state in the nation, with Ohio being a distant second.

NONAGRICULTURAL EMPLOYMENT

Nonagricultural employment in Indiana has been declining steadily over the past nine months, from 2,119,500 in September of 1981 to 2,006,000 in July of this year. Since the first of the year, employment has declined almost 3.0 percent or by nearly 62,000 jobs. Historically, July's 2,006,000 employed is 10.7 percent below a 1979 peak (2,245,900), or a loss of nearly 240,000 jobs. See figure 2.

U.S. MAN–HOURS IN INDUSTRIAL PRODUCTION
(Seasonally Adjusted Data)

	United States				*Indiana*			
		Latest Month (millions)	*Percent Change From*			*Latest Month* (thousands)	*Percent Change From*	
			One Month Ago	*One Year Ago*			*One Month Ago*	*One Year Ago*
Manufacturing	**July**	**729.6**	**–1.4**	**–10.4**	**June**	**23,110.8**	**–1.3**	**–12.6**
Food	July	66.2	4.0	–3.4	June	1,485.1	1.3	–1.8
Apparel and textiles	July	65.6	–7.2	–12.5	June	405.9	3.1	–7.1
Lumber and wood	July	23.6	–4.1	–14.9	June	625.4	–1.3	–17.6
Furniture	July	16.5	0.9	–8.3	June	650.6	4.0	–14.2
Paper	July	27.1	0.8	–6.5	June	517.7	–3.6	–9.5
Printing	July	45.9	1.6	–6.8	June	1,121.4	0.9	–9.1
Chemicals	July	46.1	3.3	–5.4	June	1,285.6	1.6	–0.8
Petroleum and products	July	9.1	0.9	–5.6	June	188.8	7.0	–9.5
Rubber and plastics	July	27.5	–2.0	–7.0	June	1,204.1	0.2	–7.5
Stone, clay and glass	July	23.9	–1.3	–11.0	June	837.1	–1.0	–8.4
Primary metals	July	35.3	–2.0	–22.2	June	3,413.1	0.1	–16.8
Fabricated metals	July	55.6	–3.1	–8.3	June	1,902.9	–1.5	–9.1
Nonelectrical machinery	July	84.7	–7.0	–12.6	June	2,469.3	–4.0	–18.2
Electrical machinery	July	81.4	1.8	–5.6	June	3,695.4	–1.5	–13.7
Transport equipment	July	73.1	0.6	–4.1	June	3,028.0	0.4	–12.8

MANUFACTURING EMPLOYMENT

Manufacturing employment for July of this year for Indiana stood at 598,182. This is a very slight improvement from June's figure (597,815). The July level is still 3.1 percent below the January 1982 level (617,470), and 10.0 percent below July a year ago (664,858). Compared to the same month in 1979, the July 1982 level is 19.0 percent lower, representing a loss of 140,200 jobs.

NONMANUFACTURING EMPLOYMENT

Indiana's nonmanufacturing employment has experienced a lesser decline in recent years. Since January of this year, nonmanufacturing employment has declined 2.3 percent (1,447,000 to 1,413,500). Historically, July's nonmanufacturing employment is 6.3 percent below July 1979 (1,509,200).

Jerry E. Vest

INDIANA INDUSTRIAL ELECTRICITY SALES
(Seasonally Adjusted in Millions of Kilowatt Hours)

	July 1982	*June 1982*	*July 1981*	*Percent Change From One Month Ago*	*Percent Change From One Year Ago*
Anderson	20.1	20.2	22.4	–.5	–10.3
Bedford	13.5	12.0	14.3	12.5	–5.6
Bloomington	4.8	4.5	3.5	6.7	37.1
Columbus	16.1	19.1	23.3	–15.7	–30.9
Connersville	7.8	9.3	9.6	–16.1	–3.1
Crawfordsville	10.9	10.3	10.0	5.8	9.0
East Chicago	17.7	20.3	24.9	–12.8	–28.9
Elkhart	21.0	21.2	23.7	–.9	–11.4
Evansville	46.2	47.3	52.3	–2.3	–11.7
Fort Wayne	39.0	42.5	44.0	–8.2	–11.4
Frankfort	7.8	8.5	8.5	–8.2	–8.2
Gary	126.3	130.2	162.1	–3.0	–22.1
Goshen	8.1	9.0	9.1	–10.0	–11.0
Hammond	58.3	59.1	56.8	–1.4	2.6
Huntington	5.1	4.6	5.6	10.9	–8.9
Indianapolis	377.2	346.7	383.5	8.8	–1.6
Jeffersonville	5.2	5.2	6.7	0.0	–22.4
Kokomo	70.4	61.0	70.1	15.4	.4
Lafayette	40.2	36.4	34.8	10.4	15.5
LaPorte	13.4	13.8	14.2	–2.9	–5.6
Logansport	8.7	7.4	10.9	17.6	–20.2
Madison	2.4	2.3	2.4	4.3	0.0
Marion	31.2	31.6	30.8	–1.3	1.3
Michigan City	43.9	42.4	48.9	3.5	–13.3
Mishawaka	4.1	3.7	4.6	10.8	–10.9
Muncie	13.0	13.7	15.1	–5.1	–13.9
New Albany	4.8	5.1	5.3	–5.9	–9.4
New Castle	8.2	7.5	9.0	9.3	–8.9
Peru	4.8	4.7	5.2	2.1	–7.7
Richmond	23.5	25.5	26.5	–7.8	–11.3
Seymour	2.4	2.4	2.6	0.0	–7.7
South Bend	26.3	26.7	28.3	–1.5	–7.1
Terre Haute	25.8	25.4	33.0	1.6	–21.8
Valparaiso	8.8	8.8	9.6	0.0	–8.3
Vincennes	3.0	2.8	2.2	7.1	36.4
Wabash	6.2	6.8	6.5	–8.8	–4.6
Indiana	**1,787.6**	**1,740.6**	**1,941.4**	**2.7**	**–7.9**

SOURCES: Data provided monthly by public and municipal electric companies.

UNITED STATES–INDIANA BUSINESS INDICATORS*

(Seasonally Adjusted Indexes Unless Otherwise Noted; Base Period: 1967 = 100)

		United States				*Indiana*		
		Latest Month	*Previous Month*	*One Year Ago*		*Latest Month*	*Previous Month*	*One Year Ago*
EMPLOYMENT								
Nonagricultural employment	July	136.6	136.6	138.9	July	112.9	113.1	118.3
Manufacturing employment	July	96.9	97.3	104.8	July	83.5	85.5	92.9
Average weekly hours (no.)+	July	38.9	39.3	39.6	July	39.4	39.7	40.2
Average weekly earnings ($)+	July	332.60	334.05	317.59	July	386.51	388.66	376.67
Nonmanufacturing employment	July	152.9	152.6	153.1	July	133.2	133.2	136.1
Unemployment rate (%)	July	9.8	9.5	7.2	July	11.1	11.3	9.4
Unemployment–married males (%)	July	6.6	6.5	3.9	—	—	—	—
Continued unemployment claims	—	—	—	—	July	467.6	552.1	695.9
PRODUCTION								
Bituminous coal production	June	143.1	148.4	122.7	—	—	—	—
Industrial electricity production	Apr.	133.3	135.1	151.2	—	—	—	—
Industrial electricity sales	—	—	—	—	July	154.0	150.3	167.4
Manufacturing production	July	137.1	137.1	153.2	July	138.1	137.9	151.4
Raw steel production	July	56.2	57.1	99.8	July	98.4	90.0	143.1
CONSTRUCTION								
Construction activity–Total	July	291.5	293.6	303.7	July	197.6	191.8	202.3
Residential housing starts	July	94.3	70.5	80.9	July	57.1	67.8	74.3
Residential expenditures	July	302.2	297.0	342.9	July	184.0	173.6	218.3
Nonresidential expenditures	July	291.5	297.2	290.0	July	174.3	176.1	213.9
Public expenditures	July	190.2	189.8	199.5	—	—	—	—
Public works and utilities	—	—	—	—	July	243.3	226.4	143.7
OTHER INDICATORS								
Personal income per capita ($)	June	11,066.4	11,032.4	10,436.7	82:1	9,887	9,839	9,484
Passenger car sales (thousands)+	July	631.0	651.0	707.0	June	13.2	15.6	15.8
Year to date (thousands)	July	4,670.0	4,039.0	5,291.0	June	75.9	62.7	97.4

*Current indicators are preliminary and subject to revision.

+Not seasonally adjusted.

SOURCES: Data on Indiana construction from McGraw-Hill Information Systems Company; Indiana passenger car registration from R.L. Polk & Co.; indexes of raw steel production for the United States and Indiana courtesy of American Iron and Steel Institute, Washington, D.C.; all other data from U.S. and Indiana government agencies and Division of Research, School of Business, Indiana University.

INDIANA BUSINESS REVIEW

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Graduate School of Business
Indiana University
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